

SAFETY DATA SHEET



AdvanceBio Amino Acid reagent kit, Part Number 5190-9426

Section 1. Identification

1.1 Product identifier

Product name : AdvanceBio Amino Acid reagent kit, Part Number 5190-9426

Part No. (Chemical Kit) : 5190-9426

Part No. :

Sarcosine, Part Number 5062-2478	5062-2478*
L-Tryptophan, Part Number 5062-2478	5062-2478*
L-Norvaline, Part Number 5062-2478	5062-2478*
L-Glutamine, Part Number 5062-2478	5062-2478*
L-Asparagine, Part Number 5062-2478	5062-2478*
L-4-Hydroxyproline, Part Number 5062-2478	5062-2478*
Dithiodipropionic, Part Number 5062-2479	5062-2479
td 1nmol 10/PK, Part Number 5061-3330	5061-3330
AA, standard 250PMOL 10/PK, Part Number 5061-3331	5061-3331
AA, standard 100PMOL 10/PK, Part Number 5061-3332	5061-3332
AA, std 25pmol 10/PK, Part Number 5061-3333	5061-3333
AA, std 10pmol 10/PK, Part Number 5061-3334	5061-3334
OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	5061-3335
Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	5061-3337
Buffer, Borate 100ml/BT, Part Number 5061-3339	5061-3339

Validation date : 1/23/2017

1.2 Relevant identified uses of the substance or mixture and uses advised against

Material uses : Analytical chemistry.

Sarcosine, Part Number 5062-2478	1 x 1 g
L-Tryptophan, Part Number 5062-2478	1 x 1 g
L-Norvaline, Part Number 5062-2478	1 x 1 g
L-Glutamine, Part Number 5062-2478	1 x 1 g
L-Asparagine, Part Number 5062-2478	1 x 1 g
L-4-Hydroxyproline, Part Number 5062-2478	1 x 1 g
Dithiodipropionic, Part Number 5062-2479	1 x 5 g
td 1nmol 10/PK, Part Number 5061-3330	10 x 1 ml
AA, standard 250PMOL 10/PK, Part Number 5061-3331	10 x 1 ml
AA, standard 100PMOL 10/PK, Part Number 5061-3332	10 x 1 ml
AA, std 25pmol 10/PK, Part Number 5061-3333	10 x 1 ml
AA, std 10pmol 10/PK, Part Number 5061-3334	10 x 1 ml
OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	6 x 1 ml
Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	10 x 1 ml
Buffer, Borate 100ml/BT, Part Number 5061-3339	1 x 100 ml

1.3 Details of the supplier of the safety data sheet

Section 1. Identification

Supplier/Manufacturer : Agilent Technologies, Inc.
5301 Stevens Creek Blvd
Santa Clara, CA 95051, USA
800-227-9770

1.4 Emergency telephone number

In case of emergency : CHEMTREC®: 1-800-424-9300

Note * : 5062-2478 AA supplement, 1g ea N 6 x 1 g
A kit containing: Sarcosine; L-Tryptophan; L-Norvaline; L-Glutamine; L-Asparagine; L-4-Hydroxyproline

Section 2. Hazards identification

2.1 Classification of the substance or mixture

OSHA/HCS status	: Sarcosine, Part Number 5062-2478	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	L-Tryptophan, Part Number 5062-2478	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	L-Norvaline, Part Number 5062-2478	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	L-Glutamine, Part Number 5062-2478	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	L-Asparagine, Part Number 5062-2478	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	L-4-Hydroxyproline, Part Number 5062-2478	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	Dithiodipropionic, Part Number 5062-2479	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	td 1nmol 10/PK, Part Number 5061-3330	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	AA, standard 250PMOL 10/PK, Part Number 5061-3331	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	AA, standard 100PMOL 10/PK, Part Number 5061-3332	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	AA, std 25pmol 10/PK, Part Number 5061-3333	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	AA, std 10pmol 10/PK, Part Number 5061-3334	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	FMOC reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	Buffer, Borate 100ml/BT, Part Number 5061-3339	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

Sarcosine, Part Number

5062-2478

Comb. Dusts COMBUSTIBLE DUSTS

L-Tryptophan, Part Number

5062-2478

Comb. Dusts COMBUSTIBLE DUSTS

Section 2. Hazards identification

L-Norvaline, Part Number 5062-2478

Comb. Dusts COMBUSTIBLE DUSTS

L-Glutamine, Part Number 5062-2478

Comb. Dusts COMBUSTIBLE DUSTS

L-Asparagine, Part Number 5062-2478

Comb. Dusts COMBUSTIBLE DUSTS

L-4-Hydroxyproline, Part Number 5062-2478

Comb. Dusts COMBUSTIBLE DUSTS

Dithiodipropionic, Part Number 5062-2479

Comb. Dusts COMBUSTIBLE DUSTS
H315 SKIN IRRITATION - Category 2
H319 EYE IRRITATION - Category 2A
H335 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract
irritation) - Category 3

td 1nmol 10/PK, Part Number 5061-3330

H290 CORROSIVE TO METALS - Category 1

AA, standard 250PMOL 10/PK, Part Number 5061-3331

H290 CORROSIVE TO METALS - Category 1

AA, standard 100PMOL 10/PK, Part Number 5061-3332

H290 CORROSIVE TO METALS - Category 1

AA, std 25pmol 10/PK, Part Number 5061-3333

H290 CORROSIVE TO METALS - Category 1

AA, std 10pmol 10/PK, Part Number 5061-3334

H290 CORROSIVE TO METALS - Category 1

OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335

H302 ACUTE TOXICITY (oral) - Category 4
H314 SKIN CORROSION - Category 1A
H318 SERIOUS EYE DAMAGE - Category 1
H317 SKIN SENSITIZATION - Category 1
H360 TOXIC TO REPRODUCTION (Fertility) - Category 1B
H360 TOXIC TO REPRODUCTION (Unborn child) - Category 1B

FMOc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337

H225 FLAMMABLE LIQUIDS - Category 2

Section 2. Hazards identification

H302	ACUTE TOXICITY (oral) - Category 4
H312	ACUTE TOXICITY (dermal) - Category 4
H332	ACUTE TOXICITY (inhalation) - Category 4
H319	EYE IRRITATION - Category 2A
H373	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (blood system, central nervous system (CNS), kidneys, liver) - Category 2

Buffer, Borate 100ml/BT, Part Number 5061-3339

H315	SKIN IRRITATION - Category 2
H319	EYE IRRITATION - Category 2A
H360	TOXIC TO REPRODUCTION (Fertility) - Category 1B
H360	TOXIC TO REPRODUCTION (Unborn child) - Category 1B

2.2 GHS label elements

Hazard pictograms



Signal word

Sarcosine, Part Number 5062-2478	Warning
L-Tryptophan, Part Number 5062-2478	Warning
L-Norvaline, Part Number 5062-2478	Warning
L-Glutamine, Part Number 5062-2478	Warning
L-Asparagine, Part Number 5062-2478	Warning
L-4-Hydroxyproline, Part Number 5062-2478	Warning
Dithiodipropionic, Part Number 5062-2479	Warning
td 1nmol 10/PK, Part Number 5061-3330	Warning
AA, standard 250PMOL 10/PK, Part Number 5061-3331	Warning
AA, standard 100PMOL 10/PK, Part Number 5061-3332	Warning
AA, std 25pmol 10/PK, Part Number 5061-3333	Warning
AA, std 10pmol 10/PK, Part Number 5061-3334	Warning
OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	Danger
Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	Danger
Buffer, Borate 100ml/BT, Part Number 5061-3339	Danger

Hazard statements

:

Section 2. Hazards identification

Sarcosine, Part Number 5062-2478	No Code(s) - May form combustible dust concentrations in air.
L-Tryptophan, Part Number 5062-2478	No Code(s) - May form combustible dust concentrations in air.
L-Norvaline, Part Number 5062-2478	No Code(s) - May form combustible dust concentrations in air.
L-Glutamine, Part Number 5062-2478	No Code(s) - May form combustible dust concentrations in air.
L-Asparagine, Part Number 5062-2478	No Code(s) - May form combustible dust concentrations in air.
L-4-Hydroxyproline, Part Number 5062-2478	No Code(s) - May form combustible dust concentrations in air.
Dithiodipropionic, Part Number 5062-2479	No Code(s) - May form combustible dust concentrations in air. GHS SYMBOL - Exclamation mark - H319 - Causes serious eye irritation. H315 - Causes skin irritation. H335 - May cause respiratory irritation. GHS SYMBOL - Corrosion -
td 1nmol 10/PK, Part Number 5061-3330	H290 - May be corrosive to metals. GHS SYMBOL - Corrosion -
AA, standard 250PMOL 10/PK, Part Number 5061-3331	H290 - May be corrosive to metals. GHS SYMBOL - Corrosion -
AA, standard 100PMOL 10/PK, Part Number 5061-3332	H290 - May be corrosive to metals. GHS SYMBOL - Corrosion -
AA, std 25pmol 10/PK, Part Number 5061-3333	H290 - May be corrosive to metals. GHS SYMBOL - Corrosion -
AA, std 10pmol 10/PK, Part Number 5061-3334	H290 - May be corrosive to metals. GHS SYMBOL - Corrosion -
OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	H290 - May be corrosive to metals. GHS SYMBOL - Exclamation mark - Corrosion - Health hazard - H302 - Harmful if swallowed. H314 - Causes severe skin burns and eye damage. H317 - May cause an allergic skin reaction. H360 - May damage fertility or the unborn child. GHS SYMBOL - Flame - Exclamation mark - Health hazard -
FMOC reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	H225 - Highly flammable liquid and vapor. H302 + H312 + H332 - Harmful if swallowed, in contact with skin or if inhaled. H319 - Causes serious eye irritation. H373 - May cause damage to organs through prolonged or repeated exposure. (blood system, central nervous system (CNS), kidneys, liver) GHS SYMBOL - Exclamation mark - Health hazard - H319 - Causes serious eye irritation. H315 - Causes skin irritation. H360 - May damage fertility or the unborn child.
Buffer, Borate 100ml/BT, Part Number 5061-3339	H290 - May be corrosive to metals. GHS SYMBOL - Corrosion -

[Precautionary statements](#)

Section 2. Hazards identification

Prevention	: Sarcosine, Part Number 5062-2478	Not applicable.
	L-Tryptophan, Part Number 5062-2478	Not applicable.
	L-Norvaline, Part Number 5062-2478	Not applicable.
	L-Glutamine, Part Number 5062-2478	Not applicable.
	L-Asparagine, Part Number 5062-2478	Not applicable.
	L-4-Hydroxyproline, Part Number 5062-2478	Not applicable.
	Dithiodipropionic, Part Number 5062-2479	P280 - Wear protective gloves. Wear eye or face protection. P271 - Use only outdoors or in a well-ventilated area. P261 - Avoid breathing dust. P264 - Wash hands thoroughly after handling. P234 - Keep only in original container.
	td 1nmol 10/PK, Part Number 5061-3330	
	AA, standard 250PMOL 10/PK, Part Number 5061-3331	P234 - Keep only in original container.
	AA, standard 100PMOL 10/PK, Part Number 5061-3332	P234 - Keep only in original container.
	AA, std 25pmol 10/PK, Part Number 5061-3333	P234 - Keep only in original container.
	AA, std 10pmol 10/PK, Part Number 5061-3334	P234 - Keep only in original container.
	OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing. P261 - Avoid breathing vapor. P270 - Do not eat, drink or smoke when using this product. P264 - Wash hands thoroughly after handling. P272 (OSHA) - Contaminated work clothing must not be allowed out of the workplace.
	FMOc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P241 - Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. P242 - Use only non-sparking tools. P243 - Take precautionary measures against static discharge. P233 - Keep container tightly closed. P271 - Use only outdoors or in a well-ventilated area. P260 - Do not breathe vapor. P270 - Do not eat, drink or smoke when using this product. P264 - Wash hands thoroughly after handling.
	Buffer, Borate 100ml/BT, Part	P201 - Obtain special instructions before use.

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Number 5061-3339

Response

: Sarcosine, Part Number 5062-2478	P202 - Do not handle until all safety precautions have been read and understood. P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing. P264 - Wash hands thoroughly after handling.
L-Tryptophan, Part Number 5062-2478	Not applicable.
L-Norvaline, Part Number 5062-2478	Not applicable.
L-Glutamine, Part Number 5062-2478	Not applicable.
L-Asparagine, Part Number 5062-2478	Not applicable.
L-4-Hydroxyproline, Part Number 5062-2478	Not applicable.
Dithiodipropionic, Part Number 5062-2479	P304 + P340 + P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. P302 + P352 + P362+P364 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. P332 + P313 - If skin irritation occurs: Get medical attention. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention. P390 - Absorb spillage to prevent material damage.
td 1nmol 10/PK, Part Number 5061-3330	P390 - Absorb spillage to prevent material damage.
AA, standard 250PMOL 10/PK, Part Number 5061-3331	P390 - Absorb spillage to prevent material damage.
AA, standard 100PMOL 10/PK, Part Number 5061-3332	P390 - Absorb spillage to prevent material damage.
AA, std 25pmol 10/PK, Part Number 5061-3333	P390 - Absorb spillage to prevent material damage.
AA, std 10pmol 10/PK, Part Number 5061-3334	P390 - Absorb spillage to prevent material damage.
OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	P308 + P313 - IF exposed or concerned: Get medical attention. P304 + P340 + P310 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. P301 + P310 + P330 + P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting. P303 + P361 + P353 + P363 + P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or physician. P302 + P352 + P363 - IF ON SKIN: Wash with plenty of soap and water. Wash contaminated

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FMOc reagent 10 ampoules 1ml
ea for AAA, Part Number
5061-3337

clothing before reuse.
P333 + P313 - If skin irritation or rash occurs: Get medical attention.
P305 + P351 + P338 + P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.
P314 - Get medical attention if you feel unwell.

P304 + P340 + P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.
P301 + P312 + P330 - IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth.
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P302 + P352 + P312 + P362+P364 - IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or physician if you feel unwell. Take off contaminated clothing and wash it before reuse.

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 - If eye irritation persists: Get medical attention.

P308 + P313 - IF exposed or concerned: Get medical attention.

P302 + P352 + P362+P364 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse.

P332 + P313 - If skin irritation occurs: Get medical attention.

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 - If eye irritation persists: Get medical attention.

Buffer, Borate 100ml/BT, Part
Number 5061-3339

Not applicable.

Not applicable.

Not applicable.

Not applicable.

Not applicable.

Not applicable.

P405 - Store locked up.

Storage

: Sarcosine, Part Number
5062-2478
L-Tryptophan, Part Number
5062-2478
L-Norvaline, Part Number
5062-2478
L-Glutamine, Part Number
5062-2478
L-Asparagine, Part Number
5062-2478
L-4-Hydroxyproline, Part Number
5062-2478
Dithiodipropionic, Part Number
5062-2479

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	td 1nmol 10/PK, Part Number 5061-3330	P406 - Store in a corrosion resistant container with a resistant inner liner.
	AA, standard 250PMOL 10/PK, Part Number 5061-3331	P406 - Store in a corrosion resistant container with a resistant inner liner.
	AA, standard 100PMOL 10/PK, Part Number 5061-3332	P406 - Store in a corrosion resistant container with a resistant inner liner.
	AA, std 25pmol 10/PK, Part Number 5061-3333	P406 - Store in a corrosion resistant container with a resistant inner liner.
	AA, std 10pmol 10/PK, Part Number 5061-3334	P406 - Store in a corrosion resistant container with a resistant inner liner.
	OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	P405 - Store locked up.
	Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	P403 - Store in a well-ventilated place.
	Buffer, Borate 100ml/BT, Part Number 5061-3339	P235 - Keep cool. P405 - Store locked up.
Disposal	: Sarcosine, Part Number 5062-2478	Not applicable.
	L-Tryptophan, Part Number 5062-2478	Not applicable.
	L-Norvaline, Part Number 5062-2478	Not applicable.
	L-Glutamine, Part Number 5062-2478	Not applicable.
	L-Asparagine, Part Number 5062-2478	Not applicable.
	L-4-Hydroxyproline, Part Number 5062-2478	Not applicable.
	Dithiodipropionic, Part Number 5062-2479	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	td 1nmol 10/PK, Part Number 5061-3330	Not applicable.
	AA, standard 250PMOL 10/PK, Part Number 5061-3331	Not applicable.
	AA, standard 100PMOL 10/PK, Part Number 5061-3332	Not applicable.
	AA, std 25pmol 10/PK, Part Number 5061-3333	Not applicable.
	AA, std 10pmol 10/PK, Part Number 5061-3334	Not applicable.
	OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	Buffer, Borate 100ml/BT, Part Number 5061-3339	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

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Supplemental label elements	: Sarcosine, Part Number 5062-2478	Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent dust accumulation.
	L-Tryptophan, Part Number 5062-2478	Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent dust accumulation.
	L-Norvaline, Part Number 5062-2478	Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent dust accumulation.
	L-Glutamine, Part Number 5062-2478	Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent dust accumulation.
	L-Asparagine, Part Number 5062-2478	Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent dust accumulation.
	L-4-Hydroxyproline, Part Number 5062-2478	Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent dust accumulation.
	Dithiodipropionic, Part Number 5062-2479	Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent dust accumulation.
	td 1nmol 10/PK, Part Number 5061-3330	None known.
	AA, standard 250PMOL 10/PK, Part Number 5061-3331	None known.
	AA, standard 100PMOL 10/PK, Part Number 5061-3332	None known.
	AA, std 25pmol 10/PK, Part Number 5061-3333	None known.
	AA, std 10pmol 10/PK, Part Number 5061-3334	None known.
	OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	Do not taste or swallow. Wash thoroughly after handling.
	FMOC reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	None known.
	Buffer, Borate 100ml/BT, Part Number 5061-3339	None known.

2.3 Other hazards

Hazards not otherwise classified	: Sarcosine, Part Number 5062-2478	None known.
	L-Tryptophan, Part Number 5062-2478	None known.
	L-Norvaline, Part Number 5062-2478	None known.
	L-Glutamine, Part Number 5062-2478	None known.
	L-Asparagine, Part Number 5062-2478	None known.
	L-4-Hydroxyproline, Part Number 5062-2478	None known.
	Dithiodipropionic, Part Number	None known.

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5062-2479 td 1nmol 10/PK, Part Number	None known.
5061-3330 AA, standard 250PMOL 10/PK, Part Number 5061-3331	None known.
AA, standard 100PMOL 10/PK, Part Number 5061-3332	None known.
AA, std 25pmol 10/PK, Part Number 5061-3333	None known.
AA, std 10pmol 10/PK, Part Number 5061-3334	None known.
OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	Causes digestive tract burns.
Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	None known.
Buffer, Borate 100ml/BT, Part Number 5061-3339	None known.

Section 3. Composition/information on ingredients

Substance/mixture	:	Sarcosine, Part Number 5062-2478	Substance
		L-Tryptophan, Part Number 5062-2478	Substance
		L-Norvaline, Part Number 5062-2478	Substance
		L-Glutamine, Part Number 5062-2478	Substance
		L-Asparagine, Part Number 5062-2478	Substance
		L-4-Hydroxyproline, Part Number 5062-2478	Substance
		Dithiodipropionic, Part Number 5062-2479	Substance
		td 1nmol 10/PK, Part Number 5061-3330	Mixture
		AA, standard 250PMOL 10/PK, Part Number 5061-3331	Mixture
		AA, standard 100PMOL 10/PK, Part Number 5061-3332	Mixture
		AA, std 25pmol 10/PK, Part Number 5061-3333	Mixture
		AA, std 10pmol 10/PK, Part Number 5061-3334	Mixture
		OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	Mixture
		Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	Mixture
		Buffer, Borate 100ml/BT, Part Number 5061-3339	Mixture

Ingredient name	%	CAS number
Sarcosine, Part Number 5062-2478 Sarcosine	100	107-97-1
L-Tryptophan, Part Number 5062-2478 L-Tryptophan	100	73-22-3
L-Norvaline, Part Number 5062-2478 Norvaline	100	6600-40-4

Section 3. Composition/information on ingredients

L-Glutamine, Part Number 5062-2478 Levoglutamide	100	56-85-9
L-Asparagine, Part Number 5062-2478 Asparagine	100	70-47-3
L-4-Hydroxyproline, Part Number 5062-2478 L-4-Hydroxyproline	100	51-35-4
Dithiodipropionic, Part Number 5062-2479 3,3'-dithiobispropionic acid	100	1119-62-6
OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335 Potassium hydroxide	≤10	1310-58-3
boric acid	≤5	10043-35-3
3-Mercaptopropionic acid	≤3	107-96-0
Methanol	<3	67-56-1
Phthalaldehyde	≤3	643-79-8
Potassium thiocyanate	≤3	333-20-0
Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337 Acetonitrile	≥90	75-05-8
Buffer, Borate 100ml/BT, Part Number 5061-3339 boric acid	<1	10043-35-3
Sodium hydroxide	≤1	1310-73-2

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

4.1 Description of necessary first aid measures

Eye contact	: Sarcosine, Part Number 5062-2478	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
	L-Tryptophan, Part Number 5062-2478	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
	L-Norvaline, Part Number 5062-2478	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
	L-Glutamine, Part Number 5062-2478	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
	L-Asparagine, Part Number 5062-2478	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids.

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L-4-Hydroxyproline, Part Number 5062-2478	Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
Dithiodipropionic, Part Number 5062-2479	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
td 1nmol 10/PK, Part Number 5061-3330	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
AA, standard 250PMOL 10/PK, Part Number 5061-3331	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
AA, standard 100PMOL 10/PK, Part Number 5061-3332	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
AA, std 25pmol 10/PK, Part Number 5061-3333	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
AA, std 10pmol 10/PK, Part Number 5061-3334	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
FMOc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
Buffer, Borate 100ml/BT, Part Number 5061-3339	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

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Inhalation

: Sarcosine, Part Number
5062-2478

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

L-Tryptophan, Part Number
5062-2478

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

L-Norvaline, Part Number
5062-2478

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

L-Glutamine, Part Number
5062-2478

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a

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L-Asparagine, Part Number
5062-2478

collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

L-4-Hydroxyproline, Part Number
5062-2478

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Dithiodipropionic, Part Number
5062-2479

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

td 1nmol 10/PK, Part Number
5061-3330

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical

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AA, standard 250PMOL 10/PK,
Part Number 5061-3331

attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

AA, standard 100PMOL 10/PK,
Part Number 5061-3332

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

AA, std 25pmol 10/PK, Part
Number 5061-3333

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

AA, std 10pmol 10/PK, Part
Number 5061-3334

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

OPA reagent, 10 mg/ml, 6
ampoules, Part Number 5061-3335

Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If

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not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

FMOc reagent 10 ampoules 1ml
ea for AAA, Part Number
5061-3337

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention following exposure or if feeling unwell. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Buffer, Borate 100ml/BT, Part
Number 5061-3339

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately.

Skin contact

: Sarcosine, Part Number
5062-2478

Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

L-Tryptophan, Part Number
5062-2478

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

L-Norvaline, Part Number
5062-2478

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

L-Glutamine, Part Number
5062-2478

Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly

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L-Asparagine, Part Number 5062-2478	before reuse. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
L-4-Hydroxyproline, Part Number 5062-2478	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Dithiodipropionic, Part Number 5062-2479	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
td 1nmol 10/PK, Part Number 5061-3330	Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
AA, standard 250PMOL 10/PK, Part Number 5061-3331	Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
AA, standard 100PMOL 10/PK, Part Number 5061-3332	Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
AA, std 25pmol 10/PK, Part Number 5061-3333	Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
AA, std 10pmol 10/PK, Part Number 5061-3334	Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
FMOC reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell. If necessary, call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

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	Buffer, Borate 100ml/BT, Part Number 5061-3339	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Ingestion	: Sarcosine, Part Number 5062-2478	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
	L-Tryptophan, Part Number 5062-2478	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
	L-Norvaline, Part Number 5062-2478	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
	L-Glutamine, Part Number 5062-2478	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is

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L-Asparagine, Part Number
5062-2478

conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

L-4-Hydroxyproline, Part Number
5062-2478

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Dithiodipropionic, Part Number
5062-2479

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie,

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td 1nmol 10/PK, Part Number
5061-3330

belt or waistband.

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

AA, standard 250PMOL 10/PK,
Part Number 5061-3331

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

AA, standard 100PMOL 10/PK,
Part Number 5061-3332

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

AA, std 25pmol 10/PK, Part
Number 5061-3333

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if

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AA, std 10pmol 10/PK, Part
Number 5061-3334

adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

OPA reagent, 10 mg/ml, 6
ampoules, Part Number 5061-3335

Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

FMOc reagent 10 ampoules 1ml
ea for AAA, Part Number
5061-3337

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Buffer, Borate 100ml/BT, Part
Number 5061-3339

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is

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conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact

: Sarcosine, Part Number 5062-2478	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.
L-Tryptophan, Part Number 5062-2478	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.
L-Norvaline, Part Number 5062-2478	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.
L-Glutamine, Part Number 5062-2478	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.
L-Asparagine, Part Number 5062-2478	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.
L-4-Hydroxyproline, Part Number 5062-2478	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.
Dithiodipropionic, Part Number 5062-2479	Causes serious eye irritation.
td 1nmol 10/PK, Part Number 5061-3330	No known significant effects or critical hazards.
AA, standard 250PMOL 10/PK, Part Number 5061-3331	No known significant effects or critical hazards.
AA, standard 100PMOL 10/PK, Part Number 5061-3332	No known significant effects or critical hazards.
AA, std 25pmol 10/PK, Part Number 5061-3333	No known significant effects or critical hazards.
AA, std 10pmol 10/PK, Part Number 5061-3334	No known significant effects or critical hazards.
OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	Causes serious eye damage.
FMOc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	Causes serious eye irritation.
Buffer, Borate 100ml/BT, Part Number 5061-3339	Causes serious eye irritation.

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Inhalation	: Sarcosine, Part Number 5062-2478	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
	L-Tryptophan, Part Number 5062-2478	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
	L-Norvaline, Part Number 5062-2478	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
	L-Glutamine, Part Number 5062-2478	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
	L-Asparagine, Part Number 5062-2478	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
	L-4-Hydroxyproline, Part Number 5062-2478	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
	Dithiodipropionic, Part Number 5062-2479	May cause respiratory irritation.
	td 1nmol 10/PK, Part Number 5061-3330	No known significant effects or critical hazards.
	AA, standard 250PMOL 10/PK, Part Number 5061-3331	No known significant effects or critical hazards.
	AA, standard 100PMOL 10/PK, Part Number 5061-3332	No known significant effects or critical hazards.
	AA, std 25pmol 10/PK, Part Number 5061-3333	No known significant effects or critical hazards.
	AA, std 10pmol 10/PK, Part Number 5061-3334	No known significant effects or critical hazards.
	OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	No known significant effects or critical hazards.
	FMOC reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	Harmful if inhaled.
	Buffer, Borate 100ml/BT, Part Number 5061-3339	No known significant effects or critical hazards.
Skin contact	: Sarcosine, Part Number 5062-2478	No known significant effects or critical hazards.
	L-Tryptophan, Part Number 5062-2478	No known significant effects or critical hazards.
	L-Norvaline, Part Number 5062-2478	No known significant effects or critical hazards.
	L-Glutamine, Part Number 5062-2478	No known significant effects or critical hazards.
	L-Asparagine, Part Number 5062-2478	No known significant effects or critical hazards.
	L-4-Hydroxyproline, Part Number 5062-2478	No known significant effects or critical hazards.
	Dithiodipropionic, Part Number 5062-2479	Causes skin irritation.
	td 1nmol 10/PK, Part Number 5061-3330	No known significant effects or critical hazards.
	AA, standard 250PMOL 10/PK, Part Number 5061-3331	No known significant effects or critical hazards.
	AA, standard 100PMOL 10/PK, Part Number 5061-3332	No known significant effects or critical hazards.
	AA, std 25pmol 10/PK, Part Number 5061-3333	No known significant effects or critical hazards.

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	AA, std 10pmol 10/PK, Part Number 5061-3334	No known significant effects or critical hazards.
	OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	Causes severe burns. May cause an allergic skin reaction.
	Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	Harmful in contact with skin.
	Buffer, Borate 100ml/BT, Part Number 5061-3339	Causes skin irritation.
Ingestion	: Sarcosine, Part Number 5062-2478	No known significant effects or critical hazards.
	L-Tryptophan, Part Number 5062-2478	No known significant effects or critical hazards.
	L-Norvaline, Part Number 5062-2478	No known significant effects or critical hazards.
	L-Glutamine, Part Number 5062-2478	No known significant effects or critical hazards.
	L-Asparagine, Part Number 5062-2478	No known significant effects or critical hazards.
	L-4-Hydroxyproline, Part Number 5062-2478	No known significant effects or critical hazards.
	Dithiodipropionic, Part Number 5062-2479	No known significant effects or critical hazards.
	td 1nmol 10/PK, Part Number 5061-3330	No known significant effects or critical hazards.
	AA, standard 250PMOL 10/PK, Part Number 5061-3331	No known significant effects or critical hazards.
	AA, standard 100PMOL 10/PK, Part Number 5061-3332	No known significant effects or critical hazards.
	AA, std 25pmol 10/PK, Part Number 5061-3333	No known significant effects or critical hazards.
	AA, std 10pmol 10/PK, Part Number 5061-3334	No known significant effects or critical hazards.
	OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	Harmful if swallowed. Corrosive to the digestive tract. Causes burns.
	Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	Harmful if swallowed.
	Buffer, Borate 100ml/BT, Part Number 5061-3339	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	: Sarcosine, Part Number 5062-2478	Adverse symptoms may include the following: irritation redness
	L-Tryptophan, Part Number 5062-2478	Adverse symptoms may include the following: irritation redness
	L-Norvaline, Part Number 5062-2478	Adverse symptoms may include the following: irritation redness
	L-Glutamine, Part Number 5062-2478	Adverse symptoms may include the following: irritation redness
	L-Asparagine, Part Number 5062-2478	Adverse symptoms may include the following:

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	L-4-Hydroxyproline, Part Number 5062-2478	irritation redness Adverse symptoms may include the following:
	Dithiodipropionic, Part Number 5062-2479	irritation redness Adverse symptoms may include the following:
	td 1nmol 10/PK, Part Number 5061-3330	pain or irritation watering redness No specific data.
	AA, standard 250PMOL 10/PK, Part Number 5061-3331	No specific data.
	AA, standard 100PMOL 10/PK, Part Number 5061-3332	No specific data.
	AA, std 25pmol 10/PK, Part Number 5061-3333	No specific data.
	AA, std 10pmol 10/PK, Part Number 5061-3334	No specific data.
	OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	Adverse symptoms may include the following:
	Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	pain watering redness Adverse symptoms may include the following:
	Buffer, Borate 100ml/BT, Part Number 5061-3339	pain or irritation watering redness Adverse symptoms may include the following:
Inhalation	: Sarcosine, Part Number 5062-2478	pain or irritation watering redness Adverse symptoms may include the following:
	L-Tryptophan, Part Number 5062-2478	respiratory tract irritation coughing Adverse symptoms may include the following:
	L-Norvaline, Part Number 5062-2478	respiratory tract irritation coughing Adverse symptoms may include the following:
	L-Glutamine, Part Number 5062-2478	respiratory tract irritation coughing Adverse symptoms may include the following:
	L-Asparagine, Part Number 5062-2478	respiratory tract irritation coughing Adverse symptoms may include the following:
	L-4-Hydroxyproline, Part Number 5062-2478	respiratory tract irritation coughing Adverse symptoms may include the following:

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		respiratory tract irritation coughing
	Dithiodipropionic, Part Number 5062-2479	Adverse symptoms may include the following:
		respiratory tract irritation coughing
	td 1nmol 10/PK, Part Number 5061-3330	No specific data.
	AA, standard 250PMOL 10/PK, Part Number 5061-3331	No specific data.
	AA, standard 100PMOL 10/PK, Part Number 5061-3332	No specific data.
	AA, std 25pmol 10/PK, Part Number 5061-3333	No specific data.
	AA, std 10pmol 10/PK, Part Number 5061-3334	No specific data.
	OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
	Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	No specific data.
	Buffer, Borate 100ml/BT, Part Number 5061-3339	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
Skin contact	: Sarcosine, Part Number 5062-2478	No specific data.
	L-Tryptophan, Part Number 5062-2478	No specific data.
	L-Norvaline, Part Number 5062-2478	No specific data.
	L-Glutamine, Part Number 5062-2478	No specific data.
	L-Asparagine, Part Number 5062-2478	No specific data.
	L-4-Hydroxyproline, Part Number 5062-2478	No specific data.
	Dithiodipropionic, Part Number 5062-2479	Adverse symptoms may include the following: irritation redness
	td 1nmol 10/PK, Part Number 5061-3330	No specific data.
	AA, standard 250PMOL 10/PK, Part Number 5061-3331	No specific data.
	AA, standard 100PMOL 10/PK, Part Number 5061-3332	No specific data.
	AA, std 25pmol 10/PK, Part Number 5061-3333	No specific data.
	AA, std 10pmol 10/PK, Part Number 5061-3334	No specific data.
	OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	Adverse symptoms may include the following: pain or irritation redness

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	Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	blistering may occur reduced fetal weight increase in fetal deaths skeletal malformations No specific data.
	Buffer, Borate 100ml/BT, Part Number 5061-3339	Adverse symptoms may include the following: irritation redness reduced fetal weight increase in fetal deaths skeletal malformations
Ingestion	: Sarcosine, Part Number 5062-2478	No specific data.
	L-Tryptophan, Part Number 5062-2478	No specific data.
	L-Norvaline, Part Number 5062-2478	No specific data.
	L-Glutamine, Part Number 5062-2478	No specific data.
	L-Asparagine, Part Number 5062-2478	No specific data.
	L-4-Hydroxyproline, Part Number 5062-2478	No specific data.
	Dithiodipropionic, Part Number 5062-2479	No specific data.
	td 1nmol 10/PK, Part Number 5061-3330	No specific data.
	AA, standard 250PMOL 10/PK, Part Number 5061-3331	No specific data.
	AA, standard 100PMOL 10/PK, Part Number 5061-3332	No specific data.
	AA, std 25pmol 10/PK, Part Number 5061-3333	No specific data.
	AA, std 10pmol 10/PK, Part Number 5061-3334	No specific data.
	OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	Adverse symptoms may include the following: stomach pains reduced fetal weight increase in fetal deaths skeletal malformations No specific data.
	Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	No specific data.
	Buffer, Borate 100ml/BT, Part Number 5061-3339	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations

4.3 Indication of immediate medical attention and special treatment needed, if necessary

Section 4. First aid measures

Notes to physician

: Sarcosine, Part Number 5062-2478	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
L-Tryptophan, Part Number 5062-2478	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
L-Norvaline, Part Number 5062-2478	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
L-Glutamine, Part Number 5062-2478	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
L-Asparagine, Part Number 5062-2478	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
L-4-Hydroxyproline, Part Number 5062-2478	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Dithiodipropionic, Part Number 5062-2479	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
td 1nmol 10/PK, Part Number 5061-3330	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
AA, standard 250PMOL 10/PK, Part Number 5061-3331	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
AA, standard 100PMOL 10/PK, Part Number 5061-3332	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
AA, std 25pmol 10/PK, Part Number 5061-3333	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
AA, std 10pmol 10/PK, Part Number 5061-3334	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
FMOC reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Buffer, Borate 100ml/BT, Part Number 5061-3339	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

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Specific treatments	: Sarcosine, Part Number 5062-2478	No specific treatment.
	L-Tryptophan, Part Number 5062-2478	No specific treatment.
	L-Norvaline, Part Number 5062-2478	No specific treatment.
	L-Glutamine, Part Number 5062-2478	No specific treatment.
	L-Asparagine, Part Number 5062-2478	No specific treatment.
	L-4-Hydroxyproline, Part Number 5062-2478	No specific treatment.
	Dithiodipropionic, Part Number 5062-2479	No specific treatment.
	td 1nmol 10/PK, Part Number 5061-3330	No specific treatment.
	AA, standard 250PMOL 10/PK, Part Number 5061-3331	No specific treatment.
	AA, standard 100PMOL 10/PK, Part Number 5061-3332	No specific treatment.
	AA, std 25pmol 10/PK, Part Number 5061-3333	No specific treatment.
	AA, std 10pmol 10/PK, Part Number 5061-3334	No specific treatment.
	OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	No specific treatment.
	Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	No specific treatment.
	Buffer, Borate 100ml/BT, Part Number 5061-3339	No specific treatment.
	Protection of first-aiders	: Sarcosine, Part Number 5062-2478
L-Tryptophan, Part Number 5062-2478		No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
L-Norvaline, Part Number 5062-2478		No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
L-Glutamine, Part Number 5062-2478		No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
L-Asparagine, Part Number 5062-2478		No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
L-4-Hydroxyproline, Part Number 5062-2478		No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
Dithiodipropionic, Part Number 5062-2479		No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing

Section 4. First aid measures

td 1nmol 10/PK, Part Number 5061-3330	apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
AA, standard 250PMOL 10/PK, Part Number 5061-3331	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
AA, standard 100PMOL 10/PK, Part Number 5061-3332	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
AA, std 25pmol 10/PK, Part Number 5061-3333	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
AA, std 10pmol 10/PK, Part Number 5061-3334	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
Buffer, Borate 100ml/BT, Part Number 5061-3339	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

[5.1 Extinguishing media](#)

Section 5. Fire-fighting measures

Suitable extinguishing media	: Sarcosine, Part Number 5062-2478	Use dry chemical powder.	
	L-Tryptophan, Part Number 5062-2478	Use dry chemical powder.	
	L-Norvaline, Part Number 5062-2478	Use dry chemical powder.	
	L-Glutamine, Part Number 5062-2478	Use dry chemical powder.	
	L-Asparagine, Part Number 5062-2478	Use dry chemical powder.	
	L-4-Hydroxyproline, Part Number 5062-2478	Use dry chemical powder.	
	Dithiodipropionic, Part Number 5062-2479	Use dry chemical powder.	
	td 1nmol 10/PK, Part Number 5061-3330	Use an extinguishing agent suitable for the surrounding fire.	
	AA, standard 250PMOL 10/PK, Part Number 5061-3331	Use an extinguishing agent suitable for the surrounding fire.	
	AA, standard 100PMOL 10/PK, Part Number 5061-3332	Use an extinguishing agent suitable for the surrounding fire.	
	AA, std 25pmol 10/PK, Part Number 5061-3333	Use an extinguishing agent suitable for the surrounding fire.	
	AA, std 10pmol 10/PK, Part Number 5061-3334	Use an extinguishing agent suitable for the surrounding fire.	
	OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	Use an extinguishing agent suitable for the surrounding fire.	
	Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	Use dry chemical, CO ₂ , water spray (fog) or foam.	
	Buffer, Borate 100ml/BT, Part Number 5061-3339	Use an extinguishing agent suitable for the surrounding fire.	
	Unsuitable extinguishing media	: Sarcosine, Part Number 5062-2478	Avoid high pressure media which could cause the formation of a potentially explosible dust-air mixture.
		L-Tryptophan, Part Number 5062-2478	Avoid high pressure media which could cause the formation of a potentially explosible dust-air mixture.
L-Norvaline, Part Number 5062-2478		Avoid high pressure media which could cause the formation of a potentially explosible dust-air mixture.	
L-Glutamine, Part Number 5062-2478		Avoid high pressure media which could cause the formation of a potentially explosible dust-air mixture.	
L-Asparagine, Part Number 5062-2478		Avoid high pressure media which could cause the formation of a potentially explosible dust-air mixture.	
L-4-Hydroxyproline, Part Number 5062-2478		Avoid high pressure media which could cause the formation of a potentially explosible dust-air mixture.	
Dithiodipropionic, Part Number 5062-2479		Avoid high pressure media which could cause the formation of a potentially explosible dust-air mixture.	
td 1nmol 10/PK, Part Number 5061-3330		None known.	
AA, standard 250PMOL 10/PK, Part Number 5061-3331		None known.	
AA, standard 100PMOL 10/PK, Part Number 5061-3332		None known.	
AA, std 25pmol 10/PK, Part Number 5061-3333		None known.	
AA, std 10pmol 10/PK, Part Number 5061-3334		None known.	
OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335		None known.	
Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number		Do not use water jet.	

Section 5. Fire-fighting measures

5061-3337
Buffer, Borate 100ml/BT, Part
Number 5061-3339

None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical

Sarcosine, Part Number 5062-2478
L-Tryptophan, Part Number 5062-2478
L-Norvaline, Part Number 5062-2478
L-Glutamine, Part Number 5062-2478
L-Asparagine, Part Number 5062-2478
L-4-Hydroxyproline, Part Number 5062-2478
Dithiodipropionic, Part Number 5062-2479
td 1nmol 10/PK, Part Number 5061-3330
AA, standard 250PMOL 10/PK, Part Number 5061-3331
AA, standard 100PMOL 10/PK, Part Number 5061-3332
AA, std 25pmol 10/PK, Part Number 5061-3333
AA, std 10pmol 10/PK, Part Number 5061-3334
OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335
FMOC reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337

May form explosible dust-air mixture if dispersed.
May form explosible dust-air mixture if dispersed.
May form explosible dust-air mixture if dispersed.
May form explosible dust-air mixture if dispersed.
May form explosible dust-air mixture if dispersed.
May form explosible dust-air mixture if dispersed.
May form explosible dust-air mixture if dispersed.
May form explosible dust-air mixture if dispersed.
In a fire or if heated, a pressure increase will occur and the container may burst.
In a fire or if heated, a pressure increase will occur and the container may burst.
In a fire or if heated, a pressure increase will occur and the container may burst.
In a fire or if heated, a pressure increase will occur and the container may burst.
In a fire or if heated, a pressure increase will occur and the container may burst.
In a fire or if heated, a pressure increase will occur and the container may burst.
Highly flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.

Buffer, Borate 100ml/BT, Part
Number 5061-3339

Hazardous thermal decomposition products

Sarcosine, Part Number 5062-2478
L-Tryptophan, Part Number 5062-2478
L-Norvaline, Part Number 5062-2478
L-Glutamine, Part Number 5062-2478

In a fire or if heated, a pressure increase will occur and the container may burst.
Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

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L-Asparagine, Part Number 5062-2478	nitrogen oxides Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides
L-4-Hydroxyproline, Part Number 5062-2478	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides
Dithiodipropionic, Part Number 5062-2479	Decomposition products may include the following materials: carbon dioxide carbon monoxide sulfur oxides
td 1nmol 10/PK, Part Number 5061-3330	No specific data.
AA, standard 250PMOL 10/PK, Part Number 5061-3331	No specific data.
AA, standard 100PMOL 10/PK, Part Number 5061-3332	No specific data.
AA, std 25pmol 10/PK, Part Number 5061-3333	No specific data.
AA, std 10pmol 10/PK, Part Number 5061-3334	No specific data.
OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides metal oxide/oxides Formaldehyde.
FMOc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides cyanides
Buffer, Borate 100ml/BT, Part Number 5061-3339	No specific data.

5.3 Advice for firefighters

Special protective actions for fire-fighters

: Sarcosine, Part Number 5062-2478	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
L-Tryptophan, Part Number 5062-2478	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Section 5. Fire-fighting measures

L-Norvaline, Part Number 5062-2478	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
L-Glutamine, Part Number 5062-2478	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
L-Asparagine, Part Number 5062-2478	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
L-4-Hydroxyproline, Part Number 5062-2478	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
Dithiodipropionic, Part Number 5062-2479	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
td 1nmol 10/PK, Part Number 5061-3330	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
AA, standard 250PMOL 10/PK, Part Number 5061-3331	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
AA, standard 100PMOL 10/PK, Part Number 5061-3332	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
AA, std 25pmol 10/PK, Part Number 5061-3333	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
AA, std 10pmol 10/PK, Part Number 5061-3334	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
FMOC reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water

Section 5. Fire-fighting measures

	Buffer, Borate 100ml/BT, Part Number 5061-3339	spray to keep fire-exposed containers cool. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters	: Sarcosine, Part Number 5062-2478	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	L-Tryptophan, Part Number 5062-2478	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	L-Norvaline, Part Number 5062-2478	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	L-Glutamine, Part Number 5062-2478	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	L-Asparagine, Part Number 5062-2478	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	L-4-Hydroxyproline, Part Number 5062-2478	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	Dithiodipropionic, Part Number 5062-2479	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	td 1nmol 10/PK, Part Number 5061-3330	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	AA, standard 250PMOL 10/PK, Part Number 5061-3331	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	AA, standard 100PMOL 10/PK, Part Number 5061-3332	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	AA, std 25pmol 10/PK, Part Number 5061-3333	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	AA, std 10pmol 10/PK, Part Number 5061-3334	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	FMOC reagent 10 ampoules 1ml ea for AAA, Part Number	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus

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5061-3337	(SCBA) with a full face-piece operated in positive pressure mode.
Buffer, Borate 100ml/BT, Part Number 5061-3339	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: Sarcosine, Part Number 5062-2478

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

L-Tryptophan, Part Number 5062-2478

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

L-Norvaline, Part Number 5062-2478

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

L-Glutamine, Part Number 5062-2478

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

L-Asparagine, Part Number 5062-2478

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on

Section 6. Accidental release measures

L-4-Hydroxyproline, Part Number 5062-2478	appropriate personal protective equipment. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
Dithiodipropionic, Part Number 5062-2479	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
td 1nmol 10/PK, Part Number 5061-3330	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
AA, standard 250PMOL 10/PK, Part Number 5061-3331	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
AA, standard 100PMOL 10/PK, Part Number 5061-3332	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
AA, std 25pmol 10/PK, Part Number 5061-3333	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
AA, std 10pmol 10/PK, Part Number 5061-3334	No action shall be taken involving any personal risk or without suitable training. Evacuate

Section 6. Accidental release measures

OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
FMOC reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
Buffer, Borate 100ml/BT, Part Number 5061-3339	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders : Sarcosine, Part Number 5062-2478	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
L-Tryptophan, Part Number 5062-2478	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
L-Norvaline, Part Number 5062-2478	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
L-Glutamine, Part Number 5062-2478	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
L-Asparagine, Part Number 5062-2478	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
L-4-Hydroxyproline, Part Number 5062-2478	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

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Dithiodipropionic, Part Number 5062-2479	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
td 1nmol 10/PK, Part Number 5061-3330	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
AA, standard 250PMOL 10/PK, Part Number 5061-3331	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
AA, standard 100PMOL 10/PK, Part Number 5061-3332	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
AA, std 25pmol 10/PK, Part Number 5061-3333	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
AA, std 10pmol 10/PK, Part Number 5061-3334	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Buffer, Borate 100ml/BT, Part Number 5061-3339	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

: Sarcosine, Part Number 5062-2478	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
L-Tryptophan, Part Number 5062-2478	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
L-Norvaline, Part Number 5062-2478	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
L-Glutamine, Part Number 5062-2478	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
L-Asparagine, Part Number 5062-2478	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

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L-4-Hydroxyproline, Part Number 5062-2478	Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Dithiodipropionic, Part Number 5062-2479	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
td 1nmol 10/PK, Part Number 5061-3330	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
AA, standard 250PMOL 10/PK, Part Number 5061-3331	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
AA, standard 100PMOL 10/PK, Part Number 5061-3332	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
AA, std 25pmol 10/PK, Part Number 5061-3333	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
AA, std 10pmol 10/PK, Part Number 5061-3334	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
FMOC reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Buffer, Borate 100ml/BT, Part Number 5061-3339	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up

Section 6. Accidental release measures

Methods for cleaning up	: Sarcosine, Part Number 5062-2478	Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
	L-Tryptophan, Part Number 5062-2478	Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
	L-Norvaline, Part Number 5062-2478	Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
	L-Glutamine, Part Number 5062-2478	Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
	L-Asparagine, Part Number 5062-2478	Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
	L-4-Hydroxyproline, Part Number 5062-2478	Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
	Dithiodipropionic, Part Number 5062-2479	Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
	td 1nmol 10/PK, Part Number 5061-3330	Stop leak if without risk. Move containers from spill area. The spilled material may be neutralized with sodium carbonate, sodium bicarbonate or sodium hydroxide. Absorb spillage to prevent material damage. Dispose of via a licensed waste disposal contractor.
	AA, standard 250PMOL 10/PK, Part Number 5061-3331	Stop leak if without risk. Move containers from spill area. The spilled material may be neutralized with sodium carbonate, sodium bicarbonate or sodium hydroxide. Absorb spillage to prevent material damage. Dispose of via a licensed waste disposal contractor.
	AA, standard 100PMOL 10/PK, Part Number 5061-3332	Stop leak if without risk. Move containers from spill area. The spilled material may be neutralized with sodium carbonate, sodium bicarbonate or sodium hydroxide. Absorb spillage to prevent material damage. Dispose of via a licensed waste disposal contractor.
	AA, std 25pmol 10/PK, Part Number 5061-3333	Stop leak if without risk. Move containers from spill area. The spilled material may be neutralized with sodium carbonate, sodium bicarbonate or sodium hydroxide. Absorb spillage to prevent material damage. Dispose of via a licensed waste disposal contractor.

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AA, std 10pmol 10/PK, Part Number 5061-3334	contractor. Stop leak if without risk. Move containers from spill area. The spilled material may be neutralized with sodium carbonate, sodium bicarbonate or sodium hydroxide. Absorb spillage to prevent material damage. Dispose of via a licensed waste disposal contractor.
OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
FMOC reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Buffer, Borate 100ml/BT, Part Number 5061-3339	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

7.1 Precautions for safe handling

Protective measures	: Sarcosine, Part Number 5062-2478	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.
	L-Tryptophan, Part Number 5062-2478	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a

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L-Norvaline, Part Number
5062-2478

compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with

adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

L-Glutamine, Part Number
5062-2478

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with

adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

L-Asparagine, Part Number
5062-2478

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original

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L-4-Hydroxyproline, Part Number
5062-2478

container or an approved alternative made from a compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container. Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container. Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container. Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from alkalis. Empty containers retain product residue

Dithiodipropionic, Part Number
5062-2479

td 1nmol 10/PK, Part Number
5061-3330

Section 7. Handling and storage

AA, standard 250PMOL 10/PK,
Part Number 5061-3331

and can be hazardous. Do not reuse container. Absorb spillage to prevent material damage. Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from alkalis. Empty containers retain product residue and can be hazardous. Do not reuse container. Absorb spillage to prevent material damage.

AA, standard 100PMOL 10/PK,
Part Number 5061-3332

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from alkalis. Empty containers retain product residue and can be hazardous. Do not reuse container. Absorb spillage to prevent material damage.

AA, std 25pmol 10/PK, Part
Number 5061-3333

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from alkalis. Empty containers retain product residue and can be hazardous. Do not reuse container. Absorb spillage to prevent material damage.

AA, std 10pmol 10/PK, Part
Number 5061-3334

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from alkalis. Empty containers retain product residue and can be hazardous. Do not reuse container. Absorb spillage to prevent material damage.

OPA reagent, 10 mg/ml, 6
ampoules, Part Number 5061-3335

Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Fmoc reagent 10 ampoules 1ml
ea for AAA, Part Number
5061-3337

Put on appropriate personal protective equipment (see Section 8). Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Wear

Section 7. Handling and storage

appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Buffer, Borate 100ml/BT, Part Number 5061-3339

Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene

: Sarcosine, Part Number 5062-2478

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

L-Tryptophan, Part Number 5062-2478

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

L-Norvaline, Part Number 5062-2478

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

L-Glutamine, Part Number 5062-2478

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

L-Asparagine, Part Number 5062-2478

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove

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Fmoc reagent 10 ampoules 1ml
ea for AAA, Part Number
5061-3337

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Buffer, Borate 100ml/BT, Part
Number 5061-3339

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

: Sarcosine, Part Number
5062-2478

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

L-Tryptophan, Part Number
5062-2478

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

L-Norvaline, Part Number
5062-2478

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

L-Glutamine, Part Number
5062-2478

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers

Section 7. Handling and storage

L-Asparagine, Part Number
5062-2478

that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

L-4-Hydroxyproline, Part Number
5062-2478

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Dithiodipropionic, Part Number
5062-2479

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

td 1nmol 10/PK, Part Number
5061-3330

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store in a corrosion resistant container with a resistant inner liner. Separate from alkalis. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

AA, standard 250PMOL 10/PK,
Part Number 5061-3331

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store in a corrosion resistant container with a resistant inner liner. Separate from alkalis.

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AA, standard 100PMOL 10/PK,
Part Number 5061-3332

Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store in a corrosion resistant container with a resistant inner liner. Separate from alkalis. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

AA, std 25pmol 10/PK, Part
Number 5061-3333

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store in a corrosion resistant container with a resistant inner liner. Separate from alkalis. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

AA, std 10pmol 10/PK, Part
Number 5061-3334

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store in a corrosion resistant container with a resistant inner liner. Separate from alkalis. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

OPA reagent, 10 mg/ml, 6
ampoules, Part Number 5061-3335

Store between the following temperatures: 2 to 8°C (35.6 to 46.4°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

FMOC reagent 10 ampoules 1ml
ea for AAA, Part Number
5061-3337

Store between the following temperatures: 2 to 8°C (35.6 to 46.4°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area,

Section 7. Handling and storage

Buffer, Borate 100ml/BT, Part Number 5061-3339

away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Store between the following temperatures: 2 to 8°C (35.6 to 46.4°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

7.3 Specific end use(s)

Recommendations

: Sarcosine, Part Number 5062-2478	Industrial applications, Professional applications.
L-Tryptophan, Part Number 5062-2478	Industrial applications, Professional applications.
L-Norvaline, Part Number 5062-2478	Industrial applications, Professional applications.
L-Glutamine, Part Number 5062-2478	Industrial applications, Professional applications.
L-Asparagine, Part Number 5062-2478	Industrial applications, Professional applications.
L-4-Hydroxyproline, Part Number 5062-2478	Industrial applications, Professional applications.
Dithiodipropionic, Part Number 5062-2479	Industrial applications, Professional applications.
td 1nmol 10/PK, Part Number 5061-3330	Industrial applications, Professional applications.
AA, standard 250PMOL 10/PK, Part Number 5061-3331	Industrial applications, Professional applications.
AA, standard 100PMOL 10/PK, Part Number 5061-3332	Industrial applications, Professional applications.
AA, std 25pmol 10/PK, Part Number 5061-3333	Industrial applications, Professional applications.
AA, std 10pmol 10/PK, Part Number 5061-3334	Industrial applications, Professional applications.
OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	Industrial applications, Professional applications.
FMOC reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	Industrial applications, Professional applications.
Buffer, Borate 100ml/BT, Part Number 5061-3339	Industrial applications, Professional applications.

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Industrial sector specific solutions	: Sarcosine, Part Number 5062-2478	Not applicable.
	L-Tryptophan, Part Number 5062-2478	Not applicable.
	L-Norvaline, Part Number 5062-2478	Not applicable.
	L-Glutamine, Part Number 5062-2478	Not applicable.
	L-Asparagine, Part Number 5062-2478	Not applicable.
	L-4-Hydroxyproline, Part Number 5062-2478	Not applicable.
	Dithiodipropionic, Part Number 5062-2479	Not applicable.
	td 1nmol 10/PK, Part Number 5061-3330	Not applicable.
	AA, standard 250PMOL 10/PK, Part Number 5061-3331	Not applicable.
	AA, standard 100PMOL 10/PK, Part Number 5061-3332	Not applicable.
	AA, std 25pmol 10/PK, Part Number 5061-3333	Not applicable.
	AA, std 10pmol 10/PK, Part Number 5061-3334	Not applicable.
	OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	Not applicable.
	Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	Not applicable.
	Buffer, Borate 100ml/BT, Part Number 5061-3339	Not applicable.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Sarcosine, Part Number 5062-2478 Sarcosine	None.
L-Tryptophan, Part Number 5062-2478 L-Tryptophan	None.
L-Norvaline, Part Number 5062-2478 Norvaline	None.
L-Glutamine, Part Number 5062-2478 Levoglutamide	None.
L-Asparagine, Part Number 5062-2478 Asparagine	None.
L-4-Hydroxyproline, Part Number 5062-2478 L-4-Hydroxyproline	None.
Dithiodipropionic, Part Number 5062-2479 3,3'-dithiobispropionic acid	None.

Section 8. Exposure controls/personal protection

OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335

Potassium hydroxide

boric acid

3-Mercaptopropionic acid

Methanol

Phthalaldehyde

Potassium thiocyanate

FMOC reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337

Acetonitrile

ACGIH TLV (United States, 3/2016).

C: 2 mg/m³

OSHA PEL 1989 (United States, 3/1989).

CEIL: 2 mg/m³

NIOSH REL (United States, 10/2013).

TWA: 2 mg/m³ 10 hours.

ACGIH TLV (United States, 3/2016).

TWA: 2 mg/m³ 8 hours. Form: Inhalable fractionSTEL: 6 mg/m³ 15 minutes. Form: Inhalable fraction

None.

ACGIH TLV (United States, 3/2016).

Absorbed through skin.

TWA: 200 ppm 8 hours.

TWA: 262 mg/m³ 8 hours.

STEL: 250 ppm 15 minutes.

STEL: 328 mg/m³ 15 minutes.

OSHA PEL 1989 (United States, 3/1989).

Absorbed through skin.

TWA: 200 ppm 8 hours.

TWA: 260 mg/m³ 8 hours.

STEL: 250 ppm 15 minutes.

STEL: 325 mg/m³ 15 minutes.

NIOSH REL (United States, 10/2013).

Absorbed through skin.

TWA: 200 ppm 10 hours.

TWA: 260 mg/m³ 10 hours.

STEL: 250 ppm 15 minutes.

STEL: 325 mg/m³ 15 minutes.

OSHA PEL (United States, 6/2016).

TWA: 200 ppm 8 hours.

TWA: 260 mg/m³ 8 hours.

None.

OSHA PEL 1989 (United States, 3/1989).

Absorbed through skin.

TWA: 5 mg/m³, (as CN) 8 hours.

OSHA PEL (United States, 6/2016).

Absorbed through skin.

TWA: 5 mg/m³, (as CN) 8 hours.

ACGIH TLV (United States, 3/2016).

Absorbed through skin.

TWA: 20 ppm 8 hours.

OSHA PEL 1989 (United States, 3/1989).

TWA: 40 ppm 8 hours.

TWA: 70 mg/m³ 8 hours.

STEL: 60 ppm 15 minutes.

STEL: 105 mg/m³ 15 minutes.

NIOSH REL (United States, 10/2013).

TWA: 20 ppm 10 hours.

TWA: 34 mg/m³ 10 hours.

OSHA PEL (United States, 6/2016).

TWA: 40 ppm 8 hours.

Section 8. Exposure controls/personal protection

Buffer, Borate 100ml/BT, Part Number 5061-3339
boric acid

Sodium hydroxide

TWA: 70 mg/m³ 8 hours.

ACGIH TLV (United States, 3/2016).

TWA: 2 mg/m³ 8 hours. Form: Inhalable fraction

STEL: 6 mg/m³ 15 minutes. Form: Inhalable fraction

ACGIH TLV (United States, 3/2016).

C: 2 mg/m³

OSHA PEL 1989 (United States, 3/1989).

CEIL: 2 mg/m³

NIOSH REL (United States, 10/2013).

CEIL: 2 mg/m³

OSHA PEL (United States, 6/2016).

TWA: 2 mg/m³ 8 hours.

8.2 Exposure controls

Appropriate engineering controls

- : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls

- : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

- : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

- : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Hand protection

- : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

- : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Section 8. Exposure controls/personal protection

- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	: Sarcosine, Part Number 5062-2478	Solid. [Powder. Deliquescent solid.]
	L-Tryptophan, Part Number 5062-2478	Solid. [Crystalline powder.]
	L-Norvaline, Part Number 5062-2478	Solid. [Crystalline powder.]
	L-Glutamine, Part Number 5062-2478	Solid. [Needles.]
	L-Asparagine, Part Number 5062-2478	Solid. [Crystals.]
	L-4-Hydroxyproline, Part Number 5062-2478	Solid. [Crystals.]
	Dithiodipropionic, Part Number 5062-2479	Solid. [Powder.]
	td 1nmol 10/PK, Part Number 5061-3330	Liquid.
	AA, standard 250PMOL 10/PK, Part Number 5061-3331	Liquid.
	AA, standard 100PMOL 10/PK, Part Number 5061-3332	Liquid.
	AA, std 25pmol 10/PK, Part Number 5061-3333	Liquid.
	AA, std 10pmol 10/PK, Part Number 5061-3334	Liquid.
	OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	Liquid.
	FMOc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	Liquid. [Clear.]
	Buffer, Borate 100ml/BT, Part Number 5061-3339	Liquid. [Clear.]
Color	: Sarcosine, Part Number 5062-2478	Not available.
	L-Tryptophan, Part Number 5062-2478	White to yellowish.
	L-Norvaline, Part Number 5062-2478	Not available.
	L-Glutamine, Part Number 5062-2478	Not available.
	L-Asparagine, Part Number 5062-2478	Not available.
	L-4-Hydroxyproline, Part Number 5062-2478	White.
	Dithiodipropionic, Part Number 5062-2479	White.
	td 1nmol 10/PK, Part Number	Colorless.

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	5061-3330	
	AA, standard 250PMOL 10/PK, Part Number 5061-3331	Colorless.
	AA, standard 100PMOL 10/PK, Part Number 5061-3332	Colorless.
	AA, std 25pmol 10/PK, Part Number 5061-3333	Colorless.
	AA, std 10pmol 10/PK, Part Number 5061-3334	Colorless.
	OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	Yellow. [Light]
	Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	Colorless.
	Buffer, Borate 100ml/BT, Part Number 5061-3339	Colorless.
Odor	: Sarcosine, Part Number 5062-2478	Not available.
	L-Tryptophan, Part Number 5062-2478	Odorless.
	L-Norvaline, Part Number 5062-2478	Not available.
	L-Glutamine, Part Number 5062-2478	Not available.
	L-Asparagine, Part Number 5062-2478	Not available.
	L-4-Hydroxyproline, Part Number 5062-2478	Odorless.
	Dithiodipropionic, Part Number 5062-2479	Unpleasant. [Strong]
	td 1nmol 10/PK, Part Number 5061-3330	Not available.
	AA, standard 250PMOL 10/PK, Part Number 5061-3331	Not available.
	AA, standard 100PMOL 10/PK, Part Number 5061-3332	Not available.
	AA, std 25pmol 10/PK, Part Number 5061-3333	Not available.
	AA, std 10pmol 10/PK, Part Number 5061-3334	Not available.
	OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	Slight
	Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	Ethereal. [Slight]
	Buffer, Borate 100ml/BT, Part Number 5061-3339	Slight
Odor threshold	: Sarcosine, Part Number 5062-2478	Not available.
	L-Tryptophan, Part Number 5062-2478	Not available.
	L-Norvaline, Part Number 5062-2478	Not available.
	L-Glutamine, Part Number 5062-2478	Not available.
	L-Asparagine, Part Number 5062-2478	Not available.
	L-4-Hydroxyproline, Part Number 5062-2478	Not available.

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	Dithiodipropionic, Part Number 5062-2479	Not available.
	td 1nmol 10/PK, Part Number 5061-3330	Not available.
	AA, standard 250PMOL 10/PK, Part Number 5061-3331	Not available.
	AA, standard 100PMOL 10/PK, Part Number 5061-3332	Not available.
	AA, std 25pmol 10/PK, Part Number 5061-3333	Not available.
	AA, std 10pmol 10/PK, Part Number 5061-3334	Not available.
	OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	Not available.
	Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	70 ppm
	Buffer, Borate 100ml/BT, Part Number 5061-3339	Not available.
pH	: Sarcosine, Part Number 5062-2478	Not available.
	L-Tryptophan, Part Number 5062-2478	5.5 to 7 [Conc. (% w/w): 1%]
	L-Norvaline, Part Number 5062-2478	Not available.
	L-Glutamine, Part Number 5062-2478	Not available.
	L-Asparagine, Part Number 5062-2478	Not available.
	L-4-Hydroxyproline, Part Number 5062-2478	Not available.
	Dithiodipropionic, Part Number 5062-2479	Not available.
	td 1nmol 10/PK, Part Number 5061-3330	1.5
	AA, standard 250PMOL 10/PK, Part Number 5061-3331	1.5
	AA, standard 100PMOL 10/PK, Part Number 5061-3332	1.5
	AA, std 25pmol 10/PK, Part Number 5061-3333	1.5
	AA, std 10pmol 10/PK, Part Number 5061-3334	1.5
	OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	10.4
	Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	Not available.
	Buffer, Borate 100ml/BT, Part Number 5061-3339	10.4
Melting point	: Sarcosine, Part Number 5062-2478	208 to 212°C (406.4 to 413.6°F)
	L-Tryptophan, Part Number 5062-2478	278.3 to 279.3°C (532.9 to 534.7°F)
	L-Norvaline, Part Number 5062-2478	300°C (572°F)
	L-Glutamine, Part Number 5062-2478	Decomposition temperature: 185°C (365°F)
	L-Asparagine, Part Number	234 to 235°C (453.2 to 455°F)

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	5062-2478	
	L-4-Hydroxyproline, Part Number	274°C (525.2°F)
	5062-2478	
	Dithiodipropionic, Part Number	155 to 158°C (311 to 316.4°F)
	5062-2479	
	td 1nmol 10/PK, Part Number	0°C (32°F)
	5061-3330	
	AA, standard 250PMOL 10/PK,	0°C (32°F)
	Part Number 5061-3331	
	AA, standard 100PMOL 10/PK,	0°C (32°F)
	Part Number 5061-3332	
	AA, std 25pmol 10/PK, Part	0°C (32°F)
	Number 5061-3333	
	AA, std 10pmol 10/PK, Part	0°C (32°F)
	Number 5061-3334	
	OPA reagent, 10 mg/ml, 6	Not available.
	ampoules, Part Number 5061-3335	
	Fmoc reagent 10 ampoules 1ml	-45°C (-49°F)
	ea for AAA, Part Number	
	5061-3337	
	Buffer, Borate 100ml/BT, Part	Not available.
	Number 5061-3339	
Boiling point	: Sarcosine, Part Number	Not available.
	5062-2478	
	L-Tryptophan, Part Number	Not available.
	5062-2478	
	L-Norvaline, Part Number	Not available.
	5062-2478	
	L-Glutamine, Part Number	Not available.
	5062-2478	
	L-Asparagine, Part Number	Not available.
	5062-2478	
	L-4-Hydroxyproline, Part Number	Not available.
	5062-2478	
	Dithiodipropionic, Part Number	Not available.
	5062-2479	
	td 1nmol 10/PK, Part Number	100°C (212°F)
	5061-3330	
	AA, standard 250PMOL 10/PK,	100°C (212°F)
	Part Number 5061-3331	
	AA, standard 100PMOL 10/PK,	100°C (212°F)
	Part Number 5061-3332	
	AA, std 25pmol 10/PK, Part	100°C (212°F)
	Number 5061-3333	
	AA, std 10pmol 10/PK, Part	100°C (212°F)
	Number 5061-3334	
	OPA reagent, 10 mg/ml, 6	Not available.
	ampoules, Part Number 5061-3335	
	Fmoc reagent 10 ampoules 1ml	81.6°C (178.9°F)
	ea for AAA, Part Number	
	5061-3337	
	Buffer, Borate 100ml/BT, Part	Not available.
	Number 5061-3339	

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Flash point	: Sarcosine, Part Number 5062-2478	Not available.	
	L-Tryptophan, Part Number 5062-2478	Not available.	
	L-Norvaline, Part Number 5062-2478	Not available.	
	L-Glutamine, Part Number 5062-2478	Not available.	
	L-Asparagine, Part Number 5062-2478	Not available.	
	L-4-Hydroxyproline, Part Number 5062-2478	Not available.	
	Dithiodipropionic, Part Number 5062-2479	Not available.	
	td 1nmol 10/PK, Part Number 5061-3330	Not available.	
	AA, standard 250PMOL 10/PK, Part Number 5061-3331	Not available.	
	AA, standard 100PMOL 10/PK, Part Number 5061-3332	Not available.	
	AA, std 25pmol 10/PK, Part Number 5061-3333	Not available.	
	AA, std 10pmol 10/PK, Part Number 5061-3334	Not available.	
	OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	Not available.	
	Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	Closed cup: 2°C (35.6°F)	
	Buffer, Borate 100ml/BT, Part Number 5061-3339	Not available.	
	Evaporation rate	: Sarcosine, Part Number 5062-2478	Not available.
		L-Tryptophan, Part Number 5062-2478	Not available.
L-Norvaline, Part Number 5062-2478		Not available.	
L-Glutamine, Part Number 5062-2478		Not available.	
L-Asparagine, Part Number 5062-2478		Not available.	
L-4-Hydroxyproline, Part Number 5062-2478		Not available.	
Dithiodipropionic, Part Number 5062-2479		Not available.	
td 1nmol 10/PK, Part Number 5061-3330		Not available.	
AA, standard 250PMOL 10/PK, Part Number 5061-3331		Not available.	
AA, standard 100PMOL 10/PK, Part Number 5061-3332		Not available.	
AA, std 25pmol 10/PK, Part Number 5061-3333		Not available.	
AA, std 10pmol 10/PK, Part Number 5061-3334		Not available.	
OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335		<1 (butyl acetate = 1)	
Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number		5.79 (butyl acetate = 1)	

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	5061-3337	
	Buffer, Borate 100ml/BT, Part Number 5061-3339	<1 (butyl acetate = 1)
Flammability (solid, gas)	: Sarcosine, Part Number 5062-2478	Not available.
	L-Tryptophan, Part Number 5062-2478	Not available.
	L-Norvaline, Part Number 5062-2478	Not available.
	L-Glutamine, Part Number 5062-2478	Not available.
	L-Asparagine, Part Number 5062-2478	Not available.
	L-4-Hydroxyproline, Part Number 5062-2478	Not available.
	Dithiodipropionic, Part Number 5062-2479	Not available.
	td 1nmol 10/PK, Part Number 5061-3330	Not applicable.
	AA, standard 250PMOL 10/PK, Part Number 5061-3331	Not applicable.
	AA, standard 100PMOL 10/PK, Part Number 5061-3332	Not applicable.
	AA, std 25pmol 10/PK, Part Number 5061-3333	Not applicable.
	AA, std 10pmol 10/PK, Part Number 5061-3334	Not applicable.
	OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	Not applicable.
	Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	Not applicable.
	Buffer, Borate 100ml/BT, Part Number 5061-3339	Not applicable.
Lower and upper explosive (flammable) limits	: Sarcosine, Part Number 5062-2478	Not available.
	L-Tryptophan, Part Number 5062-2478	Not available.
	L-Norvaline, Part Number 5062-2478	Not available.
	L-Glutamine, Part Number 5062-2478	Not available.
	L-Asparagine, Part Number 5062-2478	Not available.
	L-4-Hydroxyproline, Part Number 5062-2478	Not available.
	Dithiodipropionic, Part Number 5062-2479	Not available.
	td 1nmol 10/PK, Part Number 5061-3330	Not available.
	AA, standard 250PMOL 10/PK, Part Number 5061-3331	Not available.
	AA, standard 100PMOL 10/PK, Part Number 5061-3332	Not available.
	AA, std 25pmol 10/PK, Part Number 5061-3333	Not available.
	AA, std 10pmol 10/PK, Part Number 5061-3334	Not available.
	OPA reagent, 10 mg/ml, 6	Not available.

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	ampoules, Part Number 5061-3335	
	Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	Lower: 4.4%
	Buffer, Borate 100ml/BT, Part Number 5061-3339	Upper: 16% Not available.
Vapor pressure	: Sarcosine, Part Number 5062-2478	Not available.
	L-Tryptophan, Part Number 5062-2478	0 kPa (0 mm Hg) [room temperature]
	L-Norvaline, Part Number 5062-2478	Not available.
	L-Glutamine, Part Number 5062-2478	Not available.
	L-Asparagine, Part Number 5062-2478	0.0000000064 kPa (0.000000048 mm Hg) [room temperature]
	L-4-Hydroxyproline, Part Number 5062-2478	Not available.
	Dithiodipropionic, Part Number 5062-2479	Not available.
	td 1nmol 10/PK, Part Number 5061-3330	Not available.
	AA, standard 250PMOL 10/PK, Part Number 5061-3331	Not available.
	AA, standard 100PMOL 10/PK, Part Number 5061-3332	Not available.
	AA, std 25pmol 10/PK, Part Number 5061-3333	Not available.
	AA, std 10pmol 10/PK, Part Number 5061-3334	Not available.
	OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	Not available.
	Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	Not available.
	Buffer, Borate 100ml/BT, Part Number 5061-3339	Not available.
Vapor density	: Sarcosine, Part Number 5062-2478	Not available.
	L-Tryptophan, Part Number 5062-2478	Not available.
	L-Norvaline, Part Number 5062-2478	Not available.
	L-Glutamine, Part Number 5062-2478	Not available.
	L-Asparagine, Part Number 5062-2478	Not available.
	L-4-Hydroxyproline, Part Number 5062-2478	4.5 [Air = 1]
	Dithiodipropionic, Part Number 5062-2479	Not available.
	td 1nmol 10/PK, Part Number 5061-3330	Not available.
	AA, standard 250PMOL 10/PK, Part Number 5061-3331	Not available.
	AA, standard 100PMOL 10/PK, Part Number 5061-3332	Not available.
	AA, std 25pmol 10/PK, Part	Not available.

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	Number 5061-3333	
	AA, std 10pmol 10/PK, Part Number 5061-3334	Not available.
	OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	Not available.
	Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	Not available.
	Buffer, Borate 100ml/BT, Part Number 5061-3339	Not available.
Relative density	: Sarcosine, Part Number 5062-2478	Not available.
	L-Tryptophan, Part Number 5062-2478	1.34
	L-Norvaline, Part Number 5062-2478	Not available.
	L-Glutamine, Part Number 5062-2478	Not available.
	L-Asparagine, Part Number 5062-2478	Not available.
	L-4-Hydroxyproline, Part Number 5062-2478	Not available.
	Dithiodipropionic, Part Number 5062-2479	Not available.
	td 1nmol 10/PK, Part Number 5061-3330	Not available.
	AA, standard 250PMOL 10/PK, Part Number 5061-3331	Not available.
	AA, standard 100PMOL 10/PK, Part Number 5061-3332	Not available.
	AA, std 25pmol 10/PK, Part Number 5061-3333	Not available.
	AA, std 10pmol 10/PK, Part Number 5061-3334	Not available.
	OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	1.045
	Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	0.78
	Buffer, Borate 100ml/BT, Part Number 5061-3339	1.009
Solubility	: Sarcosine, Part Number 5062-2478	Soluble in the following materials: cold water and hot water.
	L-Tryptophan, Part Number 5062-2478	Soluble in the following materials: cold water and hot water.
	L-Norvaline, Part Number 5062-2478	Insoluble in the following materials: diethyl ether. Soluble in the following materials: cold water and hot water.
	L-Glutamine, Part Number 5062-2478	Easily soluble in the following materials: cold water and hot water.
	L-Asparagine, Part Number 5062-2478	Very slightly soluble in the following materials: methanol and diethyl ether.
	L-4-Hydroxyproline, Part Number 5062-2478	Soluble in the following materials: cold water and hot water.
	Dithiodipropionic, Part Number 5062-2479	Soluble in the following materials: cold water and hot water.
	td 1nmol 10/PK, Part Number 5061-3330	Easily soluble in the following materials: cold water and hot water.
	AA, standard 250PMOL 10/PK,	Easily soluble in the following materials: cold water

Section 9. Physical and chemical properties

	Part Number 5061-3331	and hot water.
	AA, standard 100PMOL 10/PK,	Easily soluble in the following materials: cold water
	Part Number 5061-3332	and hot water.
	AA, std 25pmol 10/PK, Part	Easily soluble in the following materials: cold water
	Number 5061-3333	and hot water.
	AA, std 10pmol 10/PK, Part	Easily soluble in the following materials: cold water
	Number 5061-3334	and hot water.
	OPA reagent, 10 mg/ml, 6	Easily soluble in the following materials: cold water
	ampoules, Part Number 5061-3335	and hot water.
	Fmoc reagent 10 ampoules 1ml	Soluble in the following materials: cold water and
	ea for AAA, Part Number	hot water.
	5061-3337	
	Buffer, Borate 100ml/BT, Part	Soluble in the following materials: cold water and
	Number 5061-3339	hot water.
Partition coefficient: n- octanol/water	: Sarcosine, Part Number	-2.78
	5062-2478	
	L-Tryptophan, Part Number	-1.06
	5062-2478	
	L-Norvaline, Part Number	-2.11
	5062-2478	
	L-Glutamine, Part Number	-3.64
	5062-2478	
	L-Asparagine, Part Number	-3.82
	5062-2478	
	L-4-Hydroxyproline, Part Number	-3.17
	5062-2478	
	Dithiodipropionic, Part Number	Not available.
	5062-2479	
	td 1nmol 10/PK, Part Number	Not available.
	5061-3330	
	AA, standard 250PMOL 10/PK,	Not available.
	Part Number 5061-3331	
	AA, standard 100PMOL 10/PK,	Not available.
	Part Number 5061-3332	
	AA, std 25pmol 10/PK, Part	Not available.
	Number 5061-3333	
	AA, std 10pmol 10/PK, Part	Not available.
	Number 5061-3334	
	OPA reagent, 10 mg/ml, 6	Not available.
	ampoules, Part Number 5061-3335	
	Fmoc reagent 10 ampoules 1ml	<1
	ea for AAA, Part Number	
	5061-3337	
	Buffer, Borate 100ml/BT, Part	Not available.
	Number 5061-3339	
Auto-ignition temperature	: Sarcosine, Part Number	Not available.
	5062-2478	
	L-Tryptophan, Part Number	>400°C (>752°F)
	5062-2478	
	L-Norvaline, Part Number	Not available.
	5062-2478	
	L-Glutamine, Part Number	Not available.
	5062-2478	
	L-Asparagine, Part Number	Not available.
	5062-2478	
	L-4-Hydroxyproline, Part Number	Not available.
	5062-2478	
	Dithiodipropionic, Part Number	Not available.
	5062-2479	

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	td 1nmol 10/PK, Part Number 5061-3330	Not available.
	AA, standard 250PMOL 10/PK, Part Number 5061-3331	Not available.
	AA, standard 100PMOL 10/PK, Part Number 5061-3332	Not available.
	AA, std 25pmol 10/PK, Part Number 5061-3333	Not available.
	AA, std 10pmol 10/PK, Part Number 5061-3334	Not available.
	OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	Not available.
	Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	524°C (975.2°F)
	Buffer, Borate 100ml/BT, Part Number 5061-3339	Not available.
Decomposition temperature	: Sarcosine, Part Number 5062-2478	212°C (413.6°F)
	L-Tryptophan, Part Number 5062-2478	289°C (552.2°F)
	L-Norvaline, Part Number 5062-2478	Not available.
	L-Glutamine, Part Number 5062-2478	185°C (365°F)
	L-Asparagine, Part Number 5062-2478	Not available.
	L-4-Hydroxyproline, Part Number 5062-2478	275°C (527°F)
	Dithiodipropionic, Part Number 5062-2479	Not available.
	td 1nmol 10/PK, Part Number 5061-3330	Not available.
	AA, standard 250PMOL 10/PK, Part Number 5061-3331	Not available.
	AA, standard 100PMOL 10/PK, Part Number 5061-3332	Not available.
	AA, std 25pmol 10/PK, Part Number 5061-3333	Not available.
	AA, std 10pmol 10/PK, Part Number 5061-3334	Not available.
	OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	Not available.
	Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	Not available.
	Buffer, Borate 100ml/BT, Part Number 5061-3339	Not available.
Viscosity	: Sarcosine, Part Number 5062-2478	Not available.
	L-Tryptophan, Part Number 5062-2478	Not available.
	L-Norvaline, Part Number 5062-2478	Not available.
	L-Glutamine, Part Number 5062-2478	Not available.
	L-Asparagine, Part Number 5062-2478	Not available.
	L-4-Hydroxyproline, Part Number	Not available.

Section 9. Physical and chemical properties

5062-2478 Dithiodipropionic, Part Number	Not available.
5062-2479 td 1nmol 10/PK, Part Number	Not available.
5061-3330 AA, standard 250PMOL 10/PK, Part Number 5061-3331	Not available.
AA, standard 100PMOL 10/PK, Part Number 5061-3332	Not available.
AA, std 25pmol 10/PK, Part Number 5061-3333	Not available.
AA, std 10pmol 10/PK, Part Number 5061-3334	Not available.
OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	Not available.
FMOC reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	Not available.
Buffer, Borate 100ml/BT, Part Number 5061-3339	Not available.

Section 10. Stability and reactivity

10.1 Reactivity

: Sarcosine, Part Number 5062-2478	No specific test data related to reactivity available for this product or its ingredients.
L-Tryptophan, Part Number 5062-2478	No specific test data related to reactivity available for this product or its ingredients.
L-Norvaline, Part Number 5062-2478	No specific test data related to reactivity available for this product or its ingredients.
L-Glutamine, Part Number 5062-2478	No specific test data related to reactivity available for this product or its ingredients.
L-Asparagine, Part Number 5062-2478	No specific test data related to reactivity available for this product or its ingredients.
L-4-Hydroxyproline, Part Number 5062-2478	No specific test data related to reactivity available for this product or its ingredients.
Dithiodipropionic, Part Number 5062-2479	No specific test data related to reactivity available for this product or its ingredients.
td 1nmol 10/PK, Part Number 5061-3330	No specific test data related to reactivity available for this product or its ingredients.
AA, standard 250PMOL 10/PK, Part Number 5061-3331	No specific test data related to reactivity available for this product or its ingredients.
AA, standard 100PMOL 10/PK, Part Number 5061-3332	No specific test data related to reactivity available for this product or its ingredients.
AA, std 25pmol 10/PK, Part Number 5061-3333	No specific test data related to reactivity available for this product or its ingredients.
AA, std 10pmol 10/PK, Part Number 5061-3334	No specific test data related to reactivity available for this product or its ingredients.
OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	No specific test data related to reactivity available for this product or its ingredients.
FMOC reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	No specific test data related to reactivity available for this product or its ingredients.
Buffer, Borate 100ml/BT, Part Number 5061-3339	No specific test data related to reactivity available for this product or its ingredients.

Section 10. Stability and reactivity

10.2 Chemical stability	: Sarcosine, Part Number 5062-2478 L-Tryptophan, Part Number 5062-2478 L-Norvaline, Part Number 5062-2478 L-Glutamine, Part Number 5062-2478 L-Asparagine, Part Number 5062-2478 L-4-Hydroxyproline, Part Number 5062-2478 Dithiodipropionic, Part Number 5062-2479 td 1nmol 10/PK, Part Number 5061-3330 AA, standard 250PMOL 10/PK, Part Number 5061-3331 AA, standard 100PMOL 10/PK, Part Number 5061-3332 AA, std 25pmol 10/PK, Part Number 5061-3333 AA, std 10pmol 10/PK, Part Number 5061-3334 OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335 FMOC reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337 Buffer, Borate 100ml/BT, Part Number 5061-3339	The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable.
10.3 Possibility of hazardous reactions	: Sarcosine, Part Number 5062-2478 L-Tryptophan, Part Number 5062-2478 L-Norvaline, Part Number 5062-2478 L-Glutamine, Part Number 5062-2478 L-Asparagine, Part Number 5062-2478 L-4-Hydroxyproline, Part Number 5062-2478 Dithiodipropionic, Part Number 5062-2479 td 1nmol 10/PK, Part Number 5061-3330 AA, standard 250PMOL 10/PK, Part Number 5061-3331 AA, standard 100PMOL 10/PK, Part Number 5061-3332 AA, std 25pmol 10/PK, Part Number 5061-3333 AA, std 10pmol 10/PK, Part Number 5061-3334 OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335 FMOC reagent 10 ampoules 1ml	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur.

Section 10. Stability and reactivity

	ea for AAA, Part Number 5061-3337	hazardous reactions will not occur.
	Buffer, Borate 100ml/BT, Part Number 5061-3339	Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	: Sarcosine, Part Number 5062-2478	Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Prevent dust accumulation.
	L-Tryptophan, Part Number 5062-2478	Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Prevent dust accumulation.
	L-Norvaline, Part Number 5062-2478	Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Prevent dust accumulation.
	L-Glutamine, Part Number 5062-2478	Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Prevent dust accumulation.
	L-Asparagine, Part Number 5062-2478	Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Prevent dust accumulation.
	L-4-Hydroxyproline, Part Number 5062-2478	Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Prevent dust accumulation.
	Dithiodipropionic, Part Number 5062-2479	Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Prevent dust accumulation.
	td 1nmol 10/PK, Part Number 5061-3330	No specific data.
	AA, standard 250PMOL 10/PK, Part Number 5061-3331	No specific data.
	AA, standard 100PMOL 10/PK,	No specific data.

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Part Number 5061-3332 AA, std 25pmol 10/PK, Part Number 5061-3333	No specific data.
AA, std 10pmol 10/PK, Part Number 5061-3334	No specific data.
OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	No specific data.
Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Store away from direct sunlight.
Buffer, Borate 100ml/BT, Part Number 5061-3339	No specific data.

10.5 Incompatible materials :	Sarcosine, Part Number 5062-2478	Reactive or incompatible with the following materials: oxidizing materials
	L-Tryptophan, Part Number 5062-2478	Reactive or incompatible with the following materials: oxidizing materials
	L-Norvaline, Part Number 5062-2478	Reactive or incompatible with the following materials: oxidizing materials
	L-Glutamine, Part Number 5062-2478	Reactive or incompatible with the following materials: oxidizing materials
	L-Asparagine, Part Number 5062-2478	Reactive or incompatible with the following materials: oxidizing materials
	L-4-Hydroxyproline, Part Number 5062-2478	Reactive or incompatible with the following materials: oxidizing materials
	Dithiodipropionic, Part Number 5062-2479	Reactive or incompatible with the following materials: oxidizing materials
	td 1nmol 10/PK, Part Number 5061-3330	Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air. Reactive or incompatible with the following materials: alkalis metals
	AA, standard 250PMOL 10/PK, Part Number 5061-3331	Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air. Reactive or incompatible with the following materials: alkalis metals
	AA, standard 100PMOL 10/PK, Part Number 5061-3332	Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air. Reactive or incompatible with the following materials: alkalis metals
	AA, std 25pmol 10/PK, Part Number 5061-3333	Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air.

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AA, std 10pmol 10/PK, Part Number 5061-3334	Reactive or incompatible with the following materials: alkalis metals Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air. Reactive or incompatible with the following materials: alkalis metals
OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335 FMOC reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	May react or be incompatible with oxidizing materials. Reactive or incompatible with the following materials: oxidizing materials May react or be incompatible with oxidizing materials.
Buffer, Borate 100ml/BT, Part Number 5061-3339	

10.6 Hazardous decomposition products

: Sarcosine, Part Number 5062-2478	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
L-Tryptophan, Part Number 5062-2478	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
L-Norvaline, Part Number 5062-2478	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
L-Glutamine, Part Number 5062-2478	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
L-Asparagine, Part Number 5062-2478	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
L-4-Hydroxyproline, Part Number 5062-2478	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Dithiodipropionic, Part Number 5062-2479	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
td 1nmol 10/PK, Part Number 5061-3330	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
AA, standard 250PMOL 10/PK, Part Number 5061-3331	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
AA, standard 100PMOL 10/PK, Part Number 5061-3332	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
AA, std 25pmol 10/PK, Part Number 5061-3333	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
AA, std 10pmol 10/PK, Part Number 5061-3334	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337
Buffer, Borate 100ml/BT, Part Number 5061-3339

Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
L-Tryptophan, Part Number 5062-2478 L-Tryptophan	LC50 Inhalation Dusts and mists	Rat - Male, Female	>5.17 mg/l	4 hours
	LD50 Oral	Rat	>16 g/kg	-
L-Glutamine, Part Number 5062-2478 Levoglutamide	LD50 Oral	Rat	7500 mg/kg	-
OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335 Potassium hydroxide	LD50 Oral	Rat	273 mg/kg	-
boric acid	LD50 Oral	Rat	2660 mg/kg	-
3-Mercaptopropionic acid	LC50 Inhalation Dusts and mists	Rat	1818 mg/m ³	4 hours
	LD50 Oral	Rat	96 mg/kg	-
Methanol	LC50 Inhalation Vapor	Rat	145000 ppm	1 hours
	LC50 Inhalation Vapor	Rat	64000 ppm	4 hours
	LD50 Dermal	Rabbit	15800 mg/kg	-
	LD50 Oral	Rat	5600 mg/kg	-
Phthalaldehyde	LD50 Oral	Rat	121 mg/kg	-
Potassium thiocyanate	LD50 Oral	Rat	854 mg/kg	-
Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337 Acetonitrile	LC50 Inhalation Vapor	Rat	17100 ppm	4 hours
	LD50 Oral	Rat	2460 mg/kg	-
Buffer, Borate 100ml/BT, Part Number 5061-3339 boric acid	LD50 Oral	Rat	2660 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335 Potassium hydroxide	Eyes - Moderate irritant	Rabbit	-	24 hours 1 milligrams	-
	Skin - Severe irritant	Guinea pig	-	24 hours 50 milligrams	-
	Skin - Severe irritant	Rabbit	-	24 hours 50 milligrams	-

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Methanol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant Skin - Moderate irritant	Rabbit Rabbit	- -	40 milligrams 24 hours 20 milligrams	- -
FMOc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337 Acetonitrile	Eyes - Moderate irritant	Rabbit	-	24 hours 100 microliters	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-
Buffer, Borate 100ml/BT, Part Number 5061-3339 Sodium hydroxide	Eyes - Severe irritant	Rabbit	-	24 hours 50 Micrograms	-
	Eyes - Severe irritant	Rabbit	-	1 Percent	-
	Eyes - Severe irritant	Rabbit	-	0.5 minutes 1 milligrams	-
	Skin - Severe irritant	Rabbit	-	24 hours 500 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Dithiodipropionic, Part Number 5062-2479 3,3'-dithiobispropionic acid	Category 3	Not applicable.	Respiratory tract irritation
OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335 boric acid	Category 3	Not applicable.	Respiratory tract irritation
Methanol	Category 1	Not determined	central nervous system (CNS)
Phthalaldehyde	Category 3	Not applicable.	Respiratory tract irritation
Buffer, Borate 100ml/BT, Part Number 5061-3339	Category 3	Not applicable.	Respiratory tract irritation

Section 11. Toxicological information

boric acid	Category 3	Not applicable.	Respiratory tract irritation
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Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
FMOc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337 Acetonitrile	Category 2	Not determined	blood system, central nervous system (CNS), kidneys and liver

Aspiration hazard

Not available.

Information on the likely routes of exposure	: Sarcosine, Part Number 5062-2478	Not available.
	L-Tryptophan, Part Number 5062-2478	Not available.
	L-Norvaline, Part Number 5062-2478	Not available.
	L-Glutamine, Part Number 5062-2478	Not available.
	L-Asparagine, Part Number 5062-2478	Not available.
	L-4-Hydroxyproline, Part Number 5062-2478	Not available.
	Dithiodipropionic, Part Number 5062-2479	Routes of entry anticipated: Oral, Dermal, Inhalation.
	td 1nmol 10/PK, Part Number 5061-3330	Not available.
	AA, standard 250PMOL 10/PK, Part Number 5061-3331	Not available.
	AA, standard 100PMOL 10/PK, Part Number 5061-3332	Not available.
	AA, std 25pmol 10/PK, Part Number 5061-3333	Not available.
	AA, std 10pmol 10/PK, Part Number 5061-3334	Not available.
	OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	Routes of entry anticipated: Oral, Dermal, Inhalation.
	FMOc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	Routes of entry anticipated: Oral, Dermal, Inhalation.
	Buffer, Borate 100ml/BT, Part Number 5061-3339	Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Eye contact	: Sarcosine, Part Number 5062-2478	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.
	L-Tryptophan, Part Number 5062-2478	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.
	L-Norvaline, Part Number 5062-2478	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

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L-Glutamine, Part Number 5062-2478	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.
L-Asparagine, Part Number 5062-2478	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.
L-4-Hydroxyproline, Part Number 5062-2478	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.
Dithiodipropionic, Part Number 5062-2479	Causes serious eye irritation.
td 1nmol 10/PK, Part Number 5061-3330	No known significant effects or critical hazards.
AA, standard 250PMOL 10/PK, Part Number 5061-3331	No known significant effects or critical hazards.
AA, standard 100PMOL 10/PK, Part Number 5061-3332	No known significant effects or critical hazards.
AA, std 25pmol 10/PK, Part Number 5061-3333	No known significant effects or critical hazards.
AA, std 10pmol 10/PK, Part Number 5061-3334	No known significant effects or critical hazards.
OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	Causes serious eye damage.
Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	Causes serious eye irritation.
Buffer, Borate 100ml/BT, Part Number 5061-3339	Causes serious eye irritation.
Inhalation : Sarcosine, Part Number 5062-2478	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
L-Tryptophan, Part Number 5062-2478	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
L-Norvaline, Part Number 5062-2478	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
L-Glutamine, Part Number 5062-2478	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
L-Asparagine, Part Number 5062-2478	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
L-4-Hydroxyproline, Part Number 5062-2478	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
Dithiodipropionic, Part Number 5062-2479	May cause respiratory irritation.
td 1nmol 10/PK, Part Number 5061-3330	No known significant effects or critical hazards.
AA, standard 250PMOL 10/PK, Part Number 5061-3331	No known significant effects or critical hazards.
AA, standard 100PMOL 10/PK, Part Number 5061-3332	No known significant effects or critical hazards.
AA, std 25pmol 10/PK, Part Number 5061-3333	No known significant effects or critical hazards.
AA, std 10pmol 10/PK, Part Number 5061-3334	No known significant effects or critical hazards.
OPA reagent, 10 mg/ml, 6	No known significant effects or critical hazards.

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	ampoules, Part Number 5061-3335	
	Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	Harmful if inhaled.
	Buffer, Borate 100ml/BT, Part Number 5061-3339	No known significant effects or critical hazards.
Skin contact	: Sarcosine, Part Number 5062-2478	No known significant effects or critical hazards.
	L-Tryptophan, Part Number 5062-2478	No known significant effects or critical hazards.
	L-Norvaline, Part Number 5062-2478	No known significant effects or critical hazards.
	L-Glutamine, Part Number 5062-2478	No known significant effects or critical hazards.
	L-Asparagine, Part Number 5062-2478	No known significant effects or critical hazards.
	L-4-Hydroxyproline, Part Number 5062-2478	No known significant effects or critical hazards.
	Dithiodipropionic, Part Number 5062-2479	Causes skin irritation.
	td 1nmol 10/PK, Part Number 5061-3330	No known significant effects or critical hazards.
	AA, standard 250PMOL 10/PK, Part Number 5061-3331	No known significant effects or critical hazards.
	AA, standard 100PMOL 10/PK, Part Number 5061-3332	No known significant effects or critical hazards.
	AA, std 25pmol 10/PK, Part Number 5061-3333	No known significant effects or critical hazards.
	AA, std 10pmol 10/PK, Part Number 5061-3334	No known significant effects or critical hazards.
	OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	Causes severe burns. May cause an allergic skin reaction.
	Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	Harmful in contact with skin.
	Buffer, Borate 100ml/BT, Part Number 5061-3339	Causes skin irritation.
Ingestion	: Sarcosine, Part Number 5062-2478	No known significant effects or critical hazards.
	L-Tryptophan, Part Number 5062-2478	No known significant effects or critical hazards.
	L-Norvaline, Part Number 5062-2478	No known significant effects or critical hazards.
	L-Glutamine, Part Number 5062-2478	No known significant effects or critical hazards.
	L-Asparagine, Part Number 5062-2478	No known significant effects or critical hazards.
	L-4-Hydroxyproline, Part Number 5062-2478	No known significant effects or critical hazards.
	Dithiodipropionic, Part Number 5062-2479	No known significant effects or critical hazards.
	td 1nmol 10/PK, Part Number 5061-3330	No known significant effects or critical hazards.
	AA, standard 250PMOL 10/PK, Part Number 5061-3331	No known significant effects or critical hazards.
	AA, standard 100PMOL 10/PK, Part Number 5061-3332	No known significant effects or critical hazards.
	AA, std 25pmol 10/PK, Part Number 5061-3333	No known significant effects or critical hazards.

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AA, std 10pmol 10/PK, Part Number 5061-3334	No known significant effects or critical hazards.
OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	Harmful if swallowed. Corrosive to the digestive tract. Causes burns.
Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	Harmful if swallowed.
Buffer, Borate 100ml/BT, Part Number 5061-3339	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: Sarcosine, Part Number 5062-2478	Adverse symptoms may include the following: irritation redness
	L-Tryptophan, Part Number 5062-2478	Adverse symptoms may include the following: irritation redness
	L-Norvaline, Part Number 5062-2478	Adverse symptoms may include the following: irritation redness
	L-Glutamine, Part Number 5062-2478	Adverse symptoms may include the following: irritation redness
	L-Asparagine, Part Number 5062-2478	Adverse symptoms may include the following: irritation redness
	L-4-Hydroxyproline, Part Number 5062-2478	Adverse symptoms may include the following: irritation redness
	Dithiodipropionic, Part Number 5062-2479	Adverse symptoms may include the following: pain or irritation watering redness
	td 1nmol 10/PK, Part Number 5061-3330	No specific data.
	AA, standard 250PMOL 10/PK, Part Number 5061-3331	No specific data.
	AA, standard 100PMOL 10/PK, Part Number 5061-3332	No specific data.
	AA, std 25pmol 10/PK, Part Number 5061-3333	No specific data.
	AA, std 10pmol 10/PK, Part Number 5061-3334	No specific data.
	OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	Adverse symptoms may include the following: pain watering redness
	Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	Adverse symptoms may include the following: pain or irritation

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Inhalation

Buffer, Borate 100ml/BT, Part Number 5061-3339	watering redness Adverse symptoms may include the following: pain or irritation watering redness Adverse symptoms may include the following:
: Sarcosine, Part Number 5062-2478	respiratory tract irritation coughing Adverse symptoms may include the following:
L-Tryptophan, Part Number 5062-2478	respiratory tract irritation coughing Adverse symptoms may include the following:
L-Norvaline, Part Number 5062-2478	respiratory tract irritation coughing Adverse symptoms may include the following:
L-Glutamine, Part Number 5062-2478	respiratory tract irritation coughing Adverse symptoms may include the following:
L-Asparagine, Part Number 5062-2478	respiratory tract irritation coughing Adverse symptoms may include the following:
L-4-Hydroxyproline, Part Number 5062-2478	respiratory tract irritation coughing Adverse symptoms may include the following:
Dithiodipropionic, Part Number 5062-2479	respiratory tract irritation coughing Adverse symptoms may include the following:
td 1nmol 10/PK, Part Number 5061-3330	No specific data.
AA, standard 250PMOL 10/PK, Part Number 5061-3331	No specific data.
AA, standard 100PMOL 10/PK, Part Number 5061-3332	No specific data.
AA, std 25pmol 10/PK, Part Number 5061-3333	No specific data.
AA, std 10pmol 10/PK, Part Number 5061-3334	No specific data.
OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	No specific data.
Buffer, Borate 100ml/BT, Part Number 5061-3339	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations

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Skin contact	: Sarcosine, Part Number 5062-2478	No specific data.
	L-Tryptophan, Part Number 5062-2478	No specific data.
	L-Norvaline, Part Number 5062-2478	No specific data.
	L-Glutamine, Part Number 5062-2478	No specific data.
	L-Asparagine, Part Number 5062-2478	No specific data.
	L-4-Hydroxyproline, Part Number 5062-2478	No specific data.
	Dithiodipropionic, Part Number 5062-2479	Adverse symptoms may include the following: irritation redness
	td 1nmol 10/PK, Part Number 5061-3330	No specific data.
	AA, standard 250PMOL 10/PK, Part Number 5061-3331	No specific data.
	AA, standard 100PMOL 10/PK, Part Number 5061-3332	No specific data.
	AA, std 25pmol 10/PK, Part Number 5061-3333	No specific data.
	AA, std 10pmol 10/PK, Part Number 5061-3334	No specific data.
	OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	Adverse symptoms may include the following: pain or irritation redness blistering may occur reduced fetal weight increase in fetal deaths skeletal malformations
	FMOc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	No specific data.
	Buffer, Borate 100ml/BT, Part Number 5061-3339	Adverse symptoms may include the following: irritation redness reduced fetal weight increase in fetal deaths skeletal malformations
Ingestion	: Sarcosine, Part Number 5062-2478	No specific data.
	L-Tryptophan, Part Number 5062-2478	No specific data.
	L-Norvaline, Part Number 5062-2478	No specific data.
	L-Glutamine, Part Number 5062-2478	No specific data.
	L-Asparagine, Part Number 5062-2478	No specific data.
	L-4-Hydroxyproline, Part Number 5062-2478	No specific data.
	Dithiodipropionic, Part Number 5062-2479	No specific data.
td 1nmol 10/PK, Part Number	No specific data.	

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5061-3330 AA, standard 250PMOL 10/PK, Part Number 5061-3331	No specific data.
AA, standard 100PMOL 10/PK, Part Number 5061-3332	No specific data.
AA, std 25pmol 10/PK, Part Number 5061-3333	No specific data.
AA, std 10pmol 10/PK, Part Number 5061-3334	No specific data.
OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	Adverse symptoms may include the following: stomach pains reduced fetal weight increase in fetal deaths skeletal malformations
FMOc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	No specific data.
Buffer, Borate 100ml/BT, Part Number 5061-3339	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General	: Sarcosine, Part Number 5062-2478 L-Tryptophan, Part Number 5062-2478 L-Norvaline, Part Number 5062-2478 L-Glutamine, Part Number 5062-2478 L-Asparagine, Part Number 5062-2478 L-4-Hydroxyproline, Part Number 5062-2478 Dithiodipropionic, Part Number 5062-2479 td 1nmol 10/PK, Part Number 5061-3330 AA, standard 250PMOL 10/PK, Part Number 5061-3331 AA, standard 100PMOL 10/PK, Part Number 5061-3332 AA, std 25pmol 10/PK, Part Number 5061-3333	Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation. Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation. Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation. Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation. Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation. Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation. Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation. Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation. Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
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	AA, std 10pmol 10/PK, Part Number 5061-3334	No known significant effects or critical hazards.
	OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
	Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	May cause damage to organs through prolonged or repeated exposure.
	Buffer, Borate 100ml/BT, Part Number 5061-3339	No known significant effects or critical hazards.
Carcinogenicity	: Sarcosine, Part Number 5062-2478	No known significant effects or critical hazards.
	L-Tryptophan, Part Number 5062-2478	No known significant effects or critical hazards.
	L-Norvaline, Part Number 5062-2478	No known significant effects or critical hazards.
	L-Glutamine, Part Number 5062-2478	No known significant effects or critical hazards.
	L-Asparagine, Part Number 5062-2478	No known significant effects or critical hazards.
	L-4-Hydroxyproline, Part Number 5062-2478	No known significant effects or critical hazards.
	Dithiodipropionic, Part Number 5062-2479	No known significant effects or critical hazards.
	td 1nmol 10/PK, Part Number 5061-3330	No known significant effects or critical hazards.
	AA, standard 250PMOL 10/PK, Part Number 5061-3331	No known significant effects or critical hazards.
	AA, standard 100PMOL 10/PK, Part Number 5061-3332	No known significant effects or critical hazards.
	AA, std 25pmol 10/PK, Part Number 5061-3333	No known significant effects or critical hazards.
	AA, std 10pmol 10/PK, Part Number 5061-3334	No known significant effects or critical hazards.
	OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	No known significant effects or critical hazards.
	Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	No known significant effects or critical hazards.
	Buffer, Borate 100ml/BT, Part Number 5061-3339	No known significant effects or critical hazards.
Mutagenicity	: Sarcosine, Part Number 5062-2478	No known significant effects or critical hazards.
	L-Tryptophan, Part Number 5062-2478	No known significant effects or critical hazards.
	L-Norvaline, Part Number 5062-2478	No known significant effects or critical hazards.
	L-Glutamine, Part Number 5062-2478	No known significant effects or critical hazards.
	L-Asparagine, Part Number 5062-2478	No known significant effects or critical hazards.
	L-4-Hydroxyproline, Part Number 5062-2478	No known significant effects or critical hazards.
	Dithiodipropionic, Part Number 5062-2479	No known significant effects or critical hazards.
	td 1nmol 10/PK, Part Number 5061-3330	No known significant effects or critical hazards.
	AA, standard 250PMOL 10/PK, Part Number 5061-3331	No known significant effects or critical hazards.

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	AA, standard 100PMOL 10/PK, Part Number 5061-3332	No known significant effects or critical hazards.
	AA, std 25pmol 10/PK, Part Number 5061-3333	No known significant effects or critical hazards.
	AA, std 10pmol 10/PK, Part Number 5061-3334	No known significant effects or critical hazards.
	OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	No known significant effects or critical hazards.
	Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	No known significant effects or critical hazards.
	Buffer, Borate 100ml/BT, Part Number 5061-3339	No known significant effects or critical hazards.
Teratogenicity	: Sarcosine, Part Number 5062-2478	No known significant effects or critical hazards.
	L-Tryptophan, Part Number 5062-2478	No known significant effects or critical hazards.
	L-Norvaline, Part Number 5062-2478	No known significant effects or critical hazards.
	L-Glutamine, Part Number 5062-2478	No known significant effects or critical hazards.
	L-Asparagine, Part Number 5062-2478	No known significant effects or critical hazards.
	L-4-Hydroxyproline, Part Number 5062-2478	No known significant effects or critical hazards.
	Dithiodipropionic, Part Number 5062-2479	No known significant effects or critical hazards.
	td 1nmol 10/PK, Part Number 5061-3330	No known significant effects or critical hazards.
	AA, standard 250PMOL 10/PK, Part Number 5061-3331	No known significant effects or critical hazards.
	AA, standard 100PMOL 10/PK, Part Number 5061-3332	No known significant effects or critical hazards.
	AA, std 25pmol 10/PK, Part Number 5061-3333	No known significant effects or critical hazards.
	AA, std 10pmol 10/PK, Part Number 5061-3334	No known significant effects or critical hazards.
	OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	May damage the unborn child.
	Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	No known significant effects or critical hazards.
	Buffer, Borate 100ml/BT, Part Number 5061-3339	May damage the unborn child.
Developmental effects	: Sarcosine, Part Number 5062-2478	No known significant effects or critical hazards.
	L-Tryptophan, Part Number 5062-2478	No known significant effects or critical hazards.
	L-Norvaline, Part Number 5062-2478	No known significant effects or critical hazards.
	L-Glutamine, Part Number 5062-2478	No known significant effects or critical hazards.
	L-Asparagine, Part Number 5062-2478	No known significant effects or critical hazards.
	L-4-Hydroxyproline, Part Number 5062-2478	No known significant effects or critical hazards.
	Dithiodipropionic, Part Number 5062-2479	No known significant effects or critical hazards.
	td 1nmol 10/PK, Part Number	No known significant effects or critical hazards.

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	5061-3330	
	AA, standard 250PMOL 10/PK, Part Number 5061-3331	No known significant effects or critical hazards.
	AA, standard 100PMOL 10/PK, Part Number 5061-3332	No known significant effects or critical hazards.
	AA, std 25pmol 10/PK, Part Number 5061-3333	No known significant effects or critical hazards.
	AA, std 10pmol 10/PK, Part Number 5061-3334	No known significant effects or critical hazards.
	OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	No known significant effects or critical hazards.
	Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	No known significant effects or critical hazards.
	Buffer, Borate 100ml/BT, Part Number 5061-3339	No known significant effects or critical hazards.
Fertility effects	: Sarcosine, Part Number 5062-2478	No known significant effects or critical hazards.
	L-Tryptophan, Part Number 5062-2478	No known significant effects or critical hazards.
	L-Norvaline, Part Number 5062-2478	No known significant effects or critical hazards.
	L-Glutamine, Part Number 5062-2478	No known significant effects or critical hazards.
	L-Asparagine, Part Number 5062-2478	No known significant effects or critical hazards.
	L-4-Hydroxyproline, Part Number 5062-2478	No known significant effects or critical hazards.
	Dithiodipropionic, Part Number 5062-2479	No known significant effects or critical hazards.
	td 1nmol 10/PK, Part Number 5061-3330	No known significant effects or critical hazards.
	AA, standard 250PMOL 10/PK, Part Number 5061-3331	No known significant effects or critical hazards.
	AA, standard 100PMOL 10/PK, Part Number 5061-3332	No known significant effects or critical hazards.
	AA, std 25pmol 10/PK, Part Number 5061-3333	No known significant effects or critical hazards.
	AA, std 10pmol 10/PK, Part Number 5061-3334	No known significant effects or critical hazards.
	OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	May damage fertility.
	Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	No known significant effects or critical hazards.
	Buffer, Borate 100ml/BT, Part Number 5061-3339	May damage fertility.

Numerical measures of toxicity

Acute toxicity estimates

Section 11. Toxicological information

Route	ATE value
OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335	
Oral	1354.2 mg/kg
Dermal	13200 mg/kg
Inhalation (vapors)	132 mg/l
Inhalation (dusts and mists)	90.9 mg/l
Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	
Oral	502.5 mg/kg
Dermal	1105.5 mg/kg
Inhalation (vapors)	11.06 mg/l

Section 12. Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
L-Tryptophan, Part Number 5062-2478			
L-Tryptophan	Acute EC50 >100 mg/l Fresh water Acute NOEC 100 mg/l Fresh water	Daphnia - Daphnia magna Daphnia - Daphnia magna	48 hours 48 hours
OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335			
Potassium hydroxide	Acute LC50 80 ppm Fresh water	Fish - Gambusia affinis - Adult	96 hours
boric acid	Acute LC50 45.5 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia	48 hours
	Acute LC50 133000 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 75 mg/l Marine water	Fish - Pagrus major	96 hours
3-Mercaptopropionic acid	Chronic NOEC 6000 µg/l Fresh water	Daphnia - Daphnia magna	21 days
	Acute EC50 9 mg/l Fresh water	Daphnia	48 hours
	Acute LC50 15 mg/l Fresh water	Fish	96 hours
Methanol	Acute EC50 24500000 µg/l Fresh water	Daphnia - Daphnia magna - Larvae	48 hours
	Acute LC50 2500000 µg/l Marine water	Crustaceans - Crangon crangon - Adult	48 hours
	Acute LC50 290 mg/l Fresh water	Fish - Danio rerio - Egg	96 hours
Phthalaldehyde	Chronic NOEC 9.96 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 184 ppb Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 90 ppb Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 20 ppb Fresh water	Fish - Oncorhynchus mykiss	96 hours
Potassium thiocyanate	Acute LC50 11000 to 15000 µg/l Fresh water	Daphnia - Daphnia pulex	48 hours
	Acute LC50 11000 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Chronic NOEC 1100 µg/l Fresh water	Fish - Lepomis macrochirus - Juvenile (Fledgling, Hatchling, Weanling)	124 days
Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337			

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Acetonitrile	Acute IC50 3685000 µg/l Fresh water Acute LC50 3600000 µg/l Fresh water Acute LC50 1000000 µg/l Fresh water Chronic NOEC 1000000 µg/l Fresh water Chronic NOEC 160000 µg/l Fresh water	Aquatic plants - Lemna minor Daphnia - Daphnia magna Fish - Pimephales promelas Aquatic plants - Lemna minor Daphnia - Daphnia magna	96 hours 48 hours 96 hours 96 hours 21 days
Buffer, Borate 100ml/BT, Part Number 5061-3339 boric acid	Acute LC50 45.5 mg/l Fresh water Acute LC50 133000 µg/l Fresh water	Crustaceans - Ceriodaphnia dubia Daphnia - Daphnia magna - Neonate	48 hours 48 hours
Sodium hydroxide	Acute LC50 75 mg/l Marine water Chronic NOEC 6000 µg/l Fresh water Acute EC50 40.38 mg/l Fresh water Acute LC50 125 ppm Fresh water	Fish - Pagrus major Daphnia - Daphnia magna Crustaceans - Ceriodaphnia dubia - Neonate Fish - Gambusia affinis - Adult	96 hours 21 days 48 hours 96 hours

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
L-Tryptophan, Part Number 5062-2478 L-Tryptophan	OECD 301B Ready Biodegradability - CO ₂ Evolution Test	77 % - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
L-Tryptophan, Part Number 5062-2478 L-Tryptophan	-	-	Readily
OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335 Potassium hydroxide boric acid	- -	- -	Readily Not readily
Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337 Acetonitrile	-	-	Readily
Buffer, Borate 100ml/BT, Part Number 5061-3339 boric acid Sodium hydroxide	- -	- -	Not readily Readily

12.3 Bioaccumulative potential

Section 12. Ecological information

Product/ingredient name	LogP _{ow}	BCF	Potential
Sarcosine, Part Number 5062-2478			
Sarcosine, Part Number 5062-2478	-2.78	-	low
Sarcosine	-2.78	-	low
L-Tryptophan, Part Number 5062-2478			
L-Tryptophan, Part Number 5062-2478	-1.06	-	low
L-Tryptophan	-1.06	-	low
L-Norvaline, Part Number 5062-2478			
L-Norvaline, Part Number 5062-2478	-2.11	-	low
Norvaline	-2.11	-	low
L-Glutamine, Part Number 5062-2478			
L-Glutamine, Part Number 5062-2478	-3.64	-	low
Levoglutamide	-3.64	-	low
L-Asparagine, Part Number 5062-2478			
L-Asparagine, Part Number 5062-2478	-3.82	-	low
Asparagine	-3.82	-	low
L-4-Hydroxyproline, Part Number 5062-2478			
L-4-Hydroxyproline, Part Number 5062-2478	-3.17	-	low
L-4-Hydroxyproline	-3.17	-	low
OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335			
boric acid	-1.09	-	low
3-Mercaptopropionic acid	-2.32	-	low
Methanol	-0.77	<10	low
Potassium thiocyanate	-2.52	-	low
FMOc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337			
FMOc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337	<1	-	low
Acetonitrile	-0.34	3	low
Buffer, Borate 100ml/BT, Part Number 5061-3339			
boric acid	-1.09	-	low

Section 12. Ecological information

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

12.5 Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

13.1 Waste treatment methods

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

United States - RCRA Toxic hazardous waste "U" List

Ingredient	CAS #	Status	Reference number
OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335 Methanol (I); Methyl alcohol (I)	67-56-1	Listed	U154
FMOc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337 Acetonitrile (I,T)	75-05-8	Listed	U003

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Section 14. Transport information

Regulatory information

Additional information : **Remarks**
De minimis quantities

DOT / IMDG / IATA : Not regulated.

Section 15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

U.S. Federal regulations : TSCA 4(a) proposed test rules: Glycine
 TSCA 8(a) PAIR: Acetonitrile
 United States inventory (TSCA 8b): Not determined.
 Clean Water Act (CWA) 307: Acetonitrile; Potassium thiocyanate
 Clean Water Act (CWA) 311: Hydrochloric acid; Sodium hydroxide; Potassium hydroxide

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
td 1nmol 10/PK, Part Number 5061-3330 Hydrochloric acid	<1	Yes.	500	-	5000	-
AA, standard 250PMOL 10/PK, Part Number 5061-3331 Hydrochloric acid	<1	Yes.	500	-	5000	-
AA, standard 100PMOL 10/PK, Part Number 5061-3332 Hydrochloric acid	<1	Yes.	500	-	5000	-
AA, std 25pmol 10/PK, Part Number 5061-3333 Hydrochloric acid	<1	Yes.	500	-	5000	-
AA, std 10pmol 10/PK, Part Number 5061-3334 Hydrochloric acid	<1	Yes.	500	-	5000	-

SARA 304 RQ : 3750000 lbs / 1702500 kg

SARA 311/312

Classification : Fire hazard
 Immediate (acute) health hazard
 Delayed (chronic) health hazard

Composition/information on ingredients

Section 15. Regulatory information

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Sarcosine, Part Number 5062-2478 Sarcosine	100	Yes.	No.	No.	No.	No.
L-Tryptophan, Part Number 5062-2478 L-Tryptophan	100	Yes.	No.	No.	No.	No.
L-Norvaline, Part Number 5062-2478 Norvaline	100	Yes.	No.	No.	No.	No.
L-Glutamine, Part Number 5062-2478 Levoglutamide	100	Yes.	No.	No.	No.	No.
L-Asparagine, Part Number 5062-2478 Asparagine	100	Yes.	No.	No.	No.	No.
L-4-Hydroxyproline, Part Number 5062-2478 L-4-Hydroxyproline	100	Yes.	No.	No.	No.	No.
Dithiodipropionic, Part Number 5062-2479 3,3'-dithiobispropionic acid	100	Yes.	No.	No.	Yes.	No.
OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335 Potassium hydroxide	≤10	No.	No.	No.	Yes.	No.
boric acid	≤5	No.	No.	No.	Yes.	Yes.
3-Mercaptopropionic acid	≤3	No.	No.	Yes.	Yes.	No.
Methanol	≤3	Yes.	No.	No.	Yes.	Yes.
Phthalaldehyde	≤3	No.	No.	No.	Yes.	No.
Potassium thiocyanate	≤3	No.	No.	No.	Yes.	No.
Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337 Acetonitrile	≥90	Yes.	No.	No.	Yes.	Yes.
Buffer, Borate 100ml/BT, Part Number 5061-3339 boric acid	<1	No.	No.	No.	Yes.	Yes.
Sodium hydroxide	≤1	No.	No.	No.	Yes.	No.

[SARA 313](#)

Section 15. Regulatory information

	Product name	CAS number	%
Form R - Reporting requirements	OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335 Methanol	67-56-1	<3
	Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337 Acetonitrile	75-05-8	≥90
Supplier notification	OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335 Methanol	67-56-1	<3
	Fmoc reagent 10 ampoules 1ml ea for AAA, Part Number 5061-3337 Acetonitrile	75-05-8	≥90

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

- Massachusetts** : The following components are listed: ACETONITRILE; POTASSIUM HYDROXIDE; METHANOL; METHYL ALCOHOL
- New York** : The following components are listed: Acetonitrile; Ethanenitrile; Potassium hydroxide; Methanol
- New Jersey** : The following components are listed: ACETONITRILE; CYANOMETHANE; POTASSIUM HYDROXIDE; CAUSTIC POTASH ; BORATE COMPOUNDS, Inorganic; METHYL ALCOHOL; METHANOL
- Pennsylvania** : The following components are listed: ACETONITRILE; POTASSIUM HYDROXIDE; METHANOL

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
OPA reagent, 10 mg/ml, 6 ampoules, Part Number 5061-3335 Methanol	No.	Yes.	No.	23000 µg/day (ingestion) 47000 µg/day (inhalation)

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

Section 15. Regulatory information

[UNECE Aarhus Protocol on POPs and Heavy Metals](#)

Not listed.

[Inventory list](#)

Australia	: Not determined.
Canada inventory	: Not determined.
China	: Not determined.
Europe	: All components are listed or exempted.
Japan	: Japan inventory (ENCS) : Not determined. Japan inventory (ISHL) : Not determined.
Malaysia	: Not determined.
New Zealand	: Not determined.
Philippines	: All components are listed or exempted.
Republic of Korea	: Not determined.
Taiwan	: All components are listed or exempted.
Turkey	: Not determined.

Section 16. Other information

[History](#)

Date of issue	: 01/23/2017
Date of previous issue	: No previous validation.
Version	: 1

✔ Indicates information that has changed from previously issued version.

Note * : 5062-2478 AA supplement, 1g ea N 6 x 1 g
A kit containing: Sarcosine; L-Tryptophan; L-Norvaline; L-Glutamine; L-Asparagine; L-4-Hydroxyproline

[Notice to reader](#)

Disclaimer: The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.